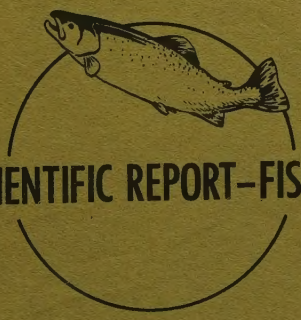
K361
257f
90

SAURY DISTRIBUTION AND ABUNDANCE, PACIFIC COAST, 1950-55

JAN 1957
LIBRARY
POFI
FISH & WILDLIFE
SERVICE



SPECIAL SCIENTIFIC REPORT–FISHERIES No. 190

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

EXPLANATORY NOTE

The series embodies results of investigations, usually of restricted scope, intended to aid or direct management or utilization practices and as guides for administrative or legislative action. It is issued in limited quantities for official use of Federal, State or cooperating agencies and in processed form for economy and to avoid delay in publication.

United States Department of the Interior, Fred A. Seaton, Secretary
Fish and Wildlife Service, John L. Farley, Director

SAURY DISTRIBUTION AND ABUNDANCE, PACIFIC COAST, 1950-55

by

Elbert H. Ahlstrom
Fishery Research Biologist

and

Harold D. Casey
Fishery Aid

Special Scientific Report--Fisheries No. 190

Washington, D. C.

November 1956

SAURY DISTRIBUTION AND ABUNDANCE, PACIFIC COAST, 1950-55

Information on the distribution and abundance of the saury, Cololabis saira, in the eastern Pacific has been obtained on the monthly survey cruises of the California Cooperative Oceanic Fisheries Investigations. The information is of two kinds: (1) collections of saury eggs in plankton hauls, and (2) visual observations of saury abundance.

The California Cooperative Oceanic Fisheries Investigations are sponsored by the Marine Research Committee, and are carried out cooperatively by the South Pacific Fishery Investigations of the United States Fish and Wildlife Service, the Scripps Institution of Oceanography of the University of California, the Bureau of Marine Fisheries of the California Department of Fish and Game, the Hopkins Marine Station of Stanford University, and the California Academy of Sciences.

The eggs of the saury are unique among planktonic fish eggs in CCOFI collections in that they frequently occur in clusters held together by adhesive filaments. The clusters of saury eggs taken in plankton hauls usually contain two to five eggs, and solitary eggs are as commonly taken in plankton hauls as are eggs in clusters. Occasionally, large clusters of eggs are found adhering to floating objects, or are taken in plankton collections. Hence, it is known that saury eggs do occur in large clusters. However, extensive fragmentation of free-floating clusters must occur soon after spawning. Saury eggs occur so commonly in plankton collections that we consider them to be primarily pelagic eggs that can be sampled by quantitative plankton procedures.

Records of saury eggs have not been reported previously. Data for six years, 1950 through 1955, are included in table 1. The numbers given in the table are standard haul totals, hence are comparable for all stations and years. Information concerning the plankton hauls is contained in the following series of reports: For 1950 (Staff of the South Pacific Fishery Investigations, 1954a); for 1951 (ibid, 1952); for 1952 (ibid, 1953); for 1953 (ibid, 1954b); for 1954 (ibid, 1955); and for 1955 (ibid, 1956).

No analyses of the data will be given in this report. A manuscript is being prepared by the authors dealing with the distribution and abundance of the saury off the Pacific coast, based largely on the data presented herein.

At the commencement of the oceanographic-biological cruises of the California Cooperative Oceanic Fisheries Investigations, an intensive dip net program was carried out at night during occupancy of hydrographic stations. Fishes were attracted to a light source, such as the working lights of a research vessel or to a special light hung over the rail, and dip netted. It was soon noted that by far the most common species taken by dip netting was the saury. A range of sizes was obtained from recently hatched to mature adults, indicating that all sizes were positively phototropic. Because the sauries offer a potential fishery resource off our coast, and are already supporting a large fishery off Japan, it seemed desirable to obtain systematic observations of saury abundance at hydrographic stations. Such a program was initiated in September 1951, under the direction of Orville P. Ball, then a staff member of the South Pacific Fishery Investigations, U. S. Fish and Wildlife Service.

Observations were made at all night stations, and records kept of saury abundance by size. Three size groups were distinguished: small, sauries under five inches in length; medium, sauries between five and ten inches in length; and large, sauries over ten inches long. Nine categories of abundance were adopted, as follows:

A. Sauries absent, or not persistent under the lights.
   0 - No sauries present.
   X - Sauries present, but not persistent under the lights.

B. Sauries persistent under the lights.
   RR - Between 1 and 5 present.
   R - Between 6 and 10 present.
   RC - Between 11 and 30 present.
   C - Between 31 and 100 present.
   VC - Between 101 and 500 present.
   A - Between 501 and 1000 present.
   VA - More than 1000 present.

Weighted numerical values have been assigned to the above categories in order to obtain a rough estimate of relative abundance. Categories that include less than 10 fish (X, RR, and R) are rated 1, those that include between 10 and 100 fish (RC and C) are rated 10, while categories having 101 to 1000 or more fish are rated 100.

Visual saury observations taken between September 1951 and December 1955 are summarized in table 2. The tables list all night stations that were occupied, including stations at which no saury observations were made. The letter "N" is used to designate a night station at which saury observations were not made.

Although this method of observation is only quasi-quantitative it does represent a practical approach for determining the distribution and relative abundance of sauries in the area being surveyed on cruises of the CCOFI.

The collections and observations at sea have been taken by a large number of individuals from the Scripps Institution of Oceanography of the University of California and the California Department of Fish and Game, as well as from the South Pacific Fishery Investigations. It is a pleasure to acknowledge the wholehearted cooperation of all participating agencies.

Literature Cited

Staff of the South Pacific Fishery Investigations

1952. Zooplankton volumes off the Pacific coast, 1951. U. S. Dept. Interior, Fish and Wildlife Service, Spec. Sci. Rept.: Fisheries No. 73, 37 pp.

1953. Zooplankton volumes off the Pacific coast, 1952. U. S. Dept. Interior, Fish and Wildlife Service, Spec. Sci. Rept.: Fisheries No. 100, 41 pp.

1954a. Zooplankton volumes off the Pacific coast, 1949-50. U. S. Dept. Interior, Fish and Wildlife Service, Spec. Sci. Rept.: Fisheries No. 125, 54 pp.

1954b. Zooplankton volumes off the Pacific coast, 1953. U. S. Dept. Interior, Fish and Wildlife Service, Spec. Sci. Rept.: Fisheries No. 132, 38 pp.

1955. Zooplankton volumes off the Pacific coast, 1954. U. S. Dept. Interior, Fish and Wildlife Service, Spec. Sci. Rept.: Fisheries No. 161, 35 pp.

1956. Zooplankton volumes off the Pacific coast, 1955. U. S. Dept. Interior, Fish and Wildlife Service, Spec. Sci. Rept.: Fisheries No. 177, 31 pp.

Record of Saury Eggs, 1950

Station number	5002 Feb.	5003 Mar.	5004 Apr.	5005 May	5006 June	5007 July	5008 Aug.	5009 Sept.	5010 Oct.	5011 Nov.	Total
20.10	-	-	-	-	-	-		-	-	-	
20.20	-	-	-	-	-	-		-	-	-	
20.30	-	-	-	-	-	-		-	-	-	
20.40	-	-	-	-	-	-		-	-	-	
20.50	-	-	-	-	-	-	9	-	-	-	9
20.60	-	-	-	-	-	-	4	-	-	-	4
20.70	-	-	-	-	-	-	3	-	-	-	3
20.80	-	-	-	-	-	-	10	-	-	-	10
20.90	-	-	-	-	-	-		-	-	-	
23.15	-	-	-	-	-	-		-	-	-	
27.20	-	-	-	-	-	-		-	-	-	
30.26	-	-	-	-	-	-		1	-	-	1
30.30	-	-	-	-	-	-			-	-	
30.40	-	-	-	-	-	-			-	-	
30.50	-	-	-	-	-	-			-	-	
30.60	-	-	-	-	-	-	2		-	-	2
30.70	-	-	-	-	-	-		21	-	-	21
30.80	-	-	-	-	-	-			-	-	
30.90	-	-	-	-	-	-			-	-	
30.100	-	-	-	-	-	-			-	-	
33.32	-	-	-	-	-	-			-	-	
37.38	-	-	-	-	-	-			-	-	
40.45	-				-				-	-	
40.50	-				-				-	-	
40.60	-				-				-	-	
40.70	-				4			4	-	-	8
40.80	-								-	-	
40.90	-								-	-	
40.100	-							28	-	-	28
40.110	-		17					2	-	-	19
40.120	-	-	-	-	-	-			-	-	
43.50	-				-	5			-	-	5
43.60	-				-				-	-	
47.55	-			-	-				-	-	
47.60	-				-	5			-	-	5
50.55									-	-	
50.60									-	-	
50.70					3			8	-	-	11
50.80									-	-	
50.90									-	-	
50.100					5				-	-	5
50.110									-	-	

Record of Saury Eggs, 1950 (cont'd)

Station number	5002 Feb.	5003 Mar.	5004 Apr.	5005 May	5006 June	5007 July	5008 Aug.	5009 Sept.	5010 Oct.	5011 Nov.	Total
50.120		2							-	-	2
50.130	1								-	-	1
53.54	-	-	-	-			1		-	-	1
53.64	-	-	-	-			-		-	-	
55.60					-	-	-	-	-	-	
57.54	-	-	-	-			3		-	-	3
57.64	-	-	-	-			-		-	-	
61.55					6		2		-	-	8
60.60					8	6	60		-	-	74
60.70					13				-	-	13
60.80									-	-	
60.90					4				-	-	4
60.100									-	-	
60.110		6		1					-	-	7
60.120			7		3				-	-	10
60.130									-	-	
63.57	-	-	-	-			11	-	-	-	11
63.67	-	-	-	-			-	-	-	-	
65.60					-	-	-	-	-	-	
67.55	-	-	-	-	4			-	-	-	4
67.65	-	-	-	-			-	-	-	-	
70.55							12			-	12
70.60										-	
70.70				3						-	3
70.80										-	
70.90					3					-	3
70.100							8			-	8
70.110	-							14		-	14
70.120	-			2						-	2
70.130	-									-	
73.51	-	-	-	-				-	-	-	
73.61	-	-	-	-			-	-	-	-	
75.60		-	-	-	-	-	-	-	-	-	
77.55	-	-	-	-	2			-	-	-	2
77.65	-	-	-	-	4		-	-	-	-	4
80.55	186	3			2			-	-	-	191
80.60	6				2			-	-	-	8
80.70					3			-	-	-	3
80.80								-	-	-	
80.90								-	-	-	
80.100			8	2				-	-	-	10
80.110								-	-	-	

Record of Saury Eggs, 1950 (cont'd)

Station number	5002 Feb.	5003 Mar.	5004 Apr.	5005 May	5006 June	5007 July	5008 Aug.	5009 Sept.	5010 Oct.	5011 Nov.	Total
80.120				5				-	-	-	5
80.130								-	-	-	
83.55	7	-					-	-	-	-	7
83.60		-						-	-		
83.70	700	-						-	-		700
83.80							-	-	-		
83.90	4		617				-	-	-		621
87.35		12					-	-	-	-	12
87.40			93	10	2		-	-	-	-	105
86.50	-	-	-	-	-			-	-	-	
87.50	7	2	-	6	-	-	-	-	-	-	15
87.60								-	-	-	
87.70		-		1				-	-	-	1
87.80		-	20				-	-	-	-	20
87.90		-					-	-	-	-	
90.30					3				-	-	3
90.37		4	18	14	6				-	-	42
90.45		4	23	76				3	-	-	106
90.53	1		4		2				-	-	7
90.60		-		2					-	-	2
90.70		-	1						-	-	1
90.80		-		1					-	-	1
90.90				2	4				-	-	6
90.100									-	-	
90.110									-	-	
90.120									-	-	
93.30			4				-	-	-	-	4
93.40							-	-	-	-	
93.50		63	2				-	-	-	-	65
93.60	-						-	-	-	-	
93.70		-	-				-	-	-	-	
93.80		-	-				-	-	-	-	
93.90		-	-	1			-	-	-	-	1
97.32		-		3	-		-	-	-		3
97.40		-					-	-	-	-	
97.50		-			2		-	-	-	-	2
97.60		-	-				-	-	-	-	
97.70		-		2			-	-	-	-	2
97.80	4	-					-	-	-	-	4
97.90		-	2				-	-	-	-	2
100.30							-		-	2	2
100.40				2	-	3	-		-	-	5

Record of Saury Eggs, 1950 (cont'd)

Station number	5002 Feb.	5003 Mar.	5004 Apr.	5005 May	5006 June	5007 July	5008 Aug.	5009 Sept.	5010 Oct.	5011 Nov.	Total
100.50				3	-		-		-	-	3
100.60	4		1	1	-		-		-	-	6
100.70				1	-		-		-	-	1
100.80					-	1	-		-	-	1
100.90		3			-		-		-	-	3
100.100					-		-		-	-	
100.110					-		-		-	-	
100.120		1			-		-	-	-	-	1
105.35							-		-		
110.35					1		-		-		1
110.40			4		-		-		-	-	4
110.50					-		-		-	-	
110.60				1	-		-		-	-	1
110.70					-		-		-	-	
110.80	1				-		-		-	-	1
110.90					-		-		-	-	
110.100			2		-		-		-	-	2
110.110					-		-		-	-	
113.35	-				16		-		-		16
115.40		-	-	-	-	-	-	-	-	-	
117.35	-				6		-		-		6
120.35							-		-		
120.45	3				1		-		-		4
120.50							-		-	479	479
120.60							-		-	17	17
120.70					-		-		-		
120.80					-		-		-		
120.90	1				-		-		-		1
120.100					-		-		-		
120.110		1			-		-		-		1
123.40							-		-		
123.50							-		-		
123.60						2	-		-		2
127.40				3			-		-		3
127.50				3		2	-	-	-		5
127.60					1		-		-		1
130.35							-		-		
130.40				4			-		-		4
130.50			4				-		-		4
130.60		3			-	1	-		-		4
130.70					-		-		-		
130.80					-		-		-		
Total	925	104	827	149	110	25	125	81	0	498	2844

Record of Saury Eggs, 1951

Station number	5101 Jan.	5102 Feb.	5103 Mar.	5104 Apr.	5105 May	5106 June	5107 July	5108 Aug.	5109 Sept.	5110 Oct.	5111 Nov.	5112 Dec.	Total
60.55		-	-										
60.60		-	-									-	
60.70	-	-	-				3					-	3
60.80	-	-	-		9		4					-	13
60.90	-	-	-			14				-		-	14
60.100	-	-	-		2	4		-	-	-		-	6
60.110	-	-	-	4	4			-	-	-	-	-	8
60.120	-	-	-	-	-	2		-	-	-	-	-	2
60.130	-	-	-	-	-		-	-	-	-	-	-	
63.52	-	-	-	-	-	-	-		-	-			
63.55	-	-	-	-	-	-	-		-	-			
63.57		-	-			6	6	-	-	-	-	-	12
63.65	-	-	-	-	-	-	-		-	-	-	-	
63.67		-	-		-	14	8	-	-	-	-	-	22
67.50	-	-	-	-	-	-	-		-	-			
67.55	1	-	-			14	5		-	-			20
67.65		-	-			4	4		-	-			8
70.51	-	-	-	-	-	-	-		-	-			
70.55		-	-		50		2	-	-	-	-	-	52
70.60		-	-			13	3						16
70.70		-	-			4	8						12
70.80		-	-			15	4						19
70.90		-	-		4	4		-			-	-	8
70.100	-	-	-					-	-	-	-	-	
70.110	-	-	-		7	2	3	-	-	-	-	-	12
70.120	-	-	-	-	-			-	-	-	-	-	
70.130	-	-	-	-	-		-	-	-	-	-	-	
73.50	-	-	-	-	-	-	-		-	-			
73.51		-	-					-	-	-	-	-	
73.60	-	-	-	-	-	-	-						
73.61		-	-			2		-	-	-	-	-	2
77.50	-	-	-	-	-	-	-						
77.55		-	-			4	2						6
77.65		-	-	7	7	4							18
80.51	-	-	-	-	-	-	-						
80.55		26		7		2	NQ					-	35
80.60		80		6	-		NQ						86
80.70				10	-								10

Record of Saury Eggs, 1951 (cont'd)

Station number	5101 Jan.	5102 Feb.	5103 Mar.	5104 Apr.	5105 May	5106 June	5107 July	5108 Aug.	5109 Sept.	5110 Oct.	5111 Nov.	5112 Dec.	Total
80.80			3		-								3
80.90		22		2	-			-					24
80.100	-	48	2		-			-				-	50
80.110	-			2	-			-	-	-	-	-	2
80.120	-		2		-	-	-	-	-	-	-	-	2
80.130	-				-	-	-	-	-	-	-	-	
83.43	-	-	-	-	-	-	-	-	-	-			
83.55	-	18	-	3		23	-	-			-	-	44
83.60		56	-			4	-	-	-		-	-	60
83.70		-	-	15	8		-	-	-	-	-	-	23
83.80		-	-		-	30	-	-	-	-	-	-	30
83.90		-	-		-		-	-	-	-	-	-	
85.38	-	-	-	-	-	-	-						
85.40	-	-		-	-	-							
85.50	-	-	2	-	-	-	-						2
85.60	-	-	-	-	-	-	-		-			-	
85.70	-	-	58	-	-	-	-		-	-	-	-	58
85.80	-	-		-	-	-	-		-	-	-	-	
85.90	-	-		-	-	-	-	-	-	-	-	-	
87.35			-				-		-	-	-	-	
87.40			-				-	-	-	-	-	-	
87.50	-	-	-				-	-	-	-	-	-	
87.60		-	-			6	-	-	-	-	-	-	6
87.70		-	-				-	-	-	-	-	-	
87.80		-	-		4	2	-	-	-	-	-	-	6
87.90		-	-	48			-	-	-	-	-	-	48
90.28	-	-	-	-	-	-	-					-	
90.30			26		4		2					-	32
90.37			3			7							10
90.45							NQ						
90.53		162	126	2	2	2							294
90.60			2		33								35
90.70			18									-	18
90.80					8				-	-	-	-	8
90.90	4				5				-	-	-	-	9
90.100	13		6	1	4				-	-	-	-	24
90.110	30		8					-	-	-	-	-	38
90.120		2	2	5		-	-	-	-	-	-	-	9
93.27	-	-	-	-	-	-	-						
93.30		25											25
93.40					13						-		13
93.50		3	46										49

Record of Saury Eggs, 1951 (cont'd)

Station number	5101 Jan.	5102 Feb.	5103 Mar.	5104 Apr.	5105 May	5106 June	5107 July	5108 Aug.	5109 Sept.	5110 Oct.	5111 Nov.	5112 Dec.	Total
93.60		7			2		-		-	-	-	-	9
93.70	2	2			2		-		-	-	-	-	6
93.80		15	23						-	-	-	-	38
93.90						6	4	-	-	-	-	-	10
97.30	-	-	-	-	-	-	-						
97.32												-	
97.40			22				2						24
97.50	2												2
97.60		2	10						-	-	-	-	12
97.70		54		2					-	-	-	-	56
97.80		6							-	-	-	-	6
97.90								-	-	-	-	-	
100.29	-	-	-	-	-	-	-						
100.30				2	2		-		12				16
100.40							2						2
100.50		2	43	4		2							51
100.60							5						5
100.70					15		3				-		18
100.80						2	2	-				-	4
100.90					3			-			-	-	3
100.100		-				-		-	-	-	-	-	
100.110		-	-		12	-	-	-	-	-	-	-	12
100.120		-	-	2	4	-	-	-	-	-	-	-	6
103.30	-	-	-	-	-	-	-	-					
103.35	-	-	12	6			-	-					18
103.40		-		4			-	-					4
103.50		-		4	6		-	-	-	-	-	-	10
103.60		-		9	2		-	-	-	-	-	-	11
103.70		-				2	-	-	-	-	-	-	2
103.80		-	9	2	6	-	-	-	-	-	-	-	17
105.32	-	-	-	-	-	-	-		-	-	-	-	
105.35			-	-	-	-	-		-	-	-	-	
105.40	-	4	-	-	-	-	-		-	-	-	-	4
105.50	-	13	-	-	-	-	-		-	-	-	-	13
105.60	-	17	-	-	-	-	-		-	-	-	-	17
105.70	-		-	-	-	-	-	-	-	-	-	-	
105.80	-		-	-	-	-	-	-	-	-	-	-	
105.90	-		-	-	-	-	-	-	-	-	-	-	

Record of Saury Eggs, 1951 (cont'd)

Station number	5101 Jan.	5102 Feb.	5103 Mar.	5104 Apr.	5105 May	5106 June	5107 July	5108 Aug.	5109 Sept.	5110 Oct.	5111 Nov.	5112 Dec.	Total
107.32	-	-	-	-	-	-	-	-		6			6
107.35	-	-				2	-	-					2
107.40		-					-	-					
107.50		-	6				-	-	-	-	-	-	6
107.60		-		4			-	-	-	-	-	-	4
107.70		-		2		2	-	-	-	-	-	-	4
107.80		-				12	-	-	-	-	-	-	12
110.33	-	-	-	-	-	-	-			22			22
110.35	2	20					-						22
110.40	4		3				-						7
110.50			5				-				3		8
110.60						3	-						3
110.70						2	-	-	-	-	-	-	2
110.80					2			-	-	-	-	-	2
110.90					8		4	-	-	-	-	-	12
110.100					2		-	-	-	-	-	-	2
110.110		-	2		2		-	-	-	-	-	-	4
113.35							-	-	-	-	-	-	
113.40						2	-	-	-	-	-	-	2
113.50			2				-	-	-	-	-	-	2
113.60		4	32	2			-	-	-	-	-	-	38
113.70		2		2		2	-	-	-	-	-	-	6
115.27	-	-	-	-	-	-	-						
115.30	-	-	-	-	-	-	-						
115.35	-	-	-	-	-	-	-						
115.40	-	-	-	-	-	-	-						
115.50	-	-	-	-	-	-	-		-	-	-	-	
115.60	-	-	-	-	-	-	-		-	-	-	-	
117.35							-	-	-	-	-	-	
117.40						5	-	-	-	-	-	-	5
117.50	2				2	6	-	-	-	-	-	-	10
117.60			40	2	3	5	-	-	-	-	-	-	50
117.70							-	-	-	-	-	-	
120.25	-	-	-	-	-	-	-						
120.30	-	-	-	-	-	-	-						
120.35				2		3							5
120.45													
120.50		2	3			3			-				8

Record of Saury Eggs, 1951 (cont'd)

Station number	5101 Jan.	5102 Feb.	5103 Mar.	5104 Apr.	5105 May	5106 June	5107 July	5108 Aug.	5109 Sept.	5110 Oct.	5111 Nov.	5112 Dec.	Total
120.60					7		25						32
120.70				15	9								24
120.80			5	2			3					-	10
120.90				6		2						-	8
120.100							-	-	-	-	-	-	
120.110	2	-			2		-	-	-	-	-	-	4
123.37	-	-	-	-	-	-	-						
123.40						3							3
123.50									-		-	-	
123.60				3	6	2			-	-	-	-	11
127.34	-	-	-	-	-	-	-					-	
127.40		2			3							-	5
127.50					4				-		-	-	4
127.60									-	-	-	-	
130.30	-	-	-	-	-	-	-					-	
130.35									NQ			-	
130.40												-	
130.50												-	
130.60					3							-	3
130.70							-	-			-	-	
130.80							-	-	-	-	-	-	
130.90	-	-	-	-	-		-	-	-	-	-	-	
133.25	-	-	-	-	-	-	-					-	
133.30												-	
133.40									-	-	-	-	
133.50									-	-	-	-	
133.60							-	-	-	-	-	-	
137.23	-	-	-	-	-	-	-					-	
137.30	-	-	-	-	-	-	-					-	
137.35								-	-	-	-	-	
137.40									-	-	-	-	
137.50									-	-	-	-	
137.60							-	-	-	-	-	-	
Total	62	594	521	187	271	248	104	0	12	28	3	0	2030

Record of Saury Eggs, 1952

Station number	5201 Jan.	5202 Feb.	5203 Mar.	5203 L.Mar.	5204 Apr.	5205 May	5206 June	5207 July	5208 Aug.	5209 Sept.	5210 Oct.	5211 Nov.	Total
60.55	-	-	-	-		-							
60.60	-	-	-	-		-		15	-				15
60.65	-	-	-	-	-	-		NQ	-	-	-	-	
60.70	-	-	-	-		-		14	-				14
60.80	-	-	-	-		3	-	-	-				3
60.90	-	-	-	-		3			-				3
60.100	-	-	-	-	-		3	-	-				3
60.110	-	-	-	-	-	-	-	-	-				
63.52	-	-	-	-									
63.55	-	-	-	-									
63.60	-	-	-	-	-		23		-	-	-	-	23
63.65	-	-	-	-	-				-	-	-	-	
67.50	-	-	-	-				NQ			-		
67.55	-	-	-	-									
67.60	-	-	-	-	-	-			-	-	-	-	
67.65	-	-	-	-	-	-							
70.51	-	-	-	-	-	-	-				-		
70.55	-	-	-	-				-	-	-	-	-	
70.60	-	-	-	-			6						6
70.65	-	-	-	-	-				-	-	-	-	
70.70	-	-	-	-									
70.75	-	-	-	-	-	-		-	-	-	-	-	
70.80	-	-	-	-									
70.90	-	-	-	-		3			-	-	-	-	3
70.100	-	-	-	-	-			-	-	-	-	-	
73.50	-	-	-	-									
73.55	-	-	-	-	-				-	-	-	-	
73.60	-	-	-	-			NQ						
77.50	-	-	-	-							-		
77.55	-	-	-	-									
77.60	-	-	-	-	-				-	-	-	-	
77.65	-	-	-	-	-		NQ						
80.51				-				2					2
80.55				-									
80.60				-	6								6
80.65	-	-	-	-	-	-			-	-	-	-	
80.70				-									
80.75	-	-	-	-	-	-	NQ	-	-	-	-	-	
80.80				-	5		8						13
80.85	-	-	-	-	-	3	-	-	-	-	-	-	3

Record of Saury Eggs, 1952 (cont'd)

Station number	5201 Jan.	5202 Feb.	5203 Mar.	5203 L.Mar.	5204 Apr.	5205 May	5206 June	5207 July	5208 Aug.	5209 Sept.	5210 Oct.	5211 Nov.	Total
80.90			NQ	-	6								6
80.100			-	-									
80.110		-	-	-	-	-	-	-	-	-	-	-	
83.43	-	-	-	-	-			-	-	-	-	-	
83.55	-	-	-	-	2			-	-	-	-	-	2
83.60	-	-	-	-				-	-	-	-	-	
83.65	-	-	-	-	-		-	-	-	-	-	-	
83.70	-	-	-	-	4			-	-	-	-	-	4
83.75	-	-	-	-	-			-	-	-	-	-	
83.80	-	-	-	-	14		4	-	-	-	-	-	18
83.90	-	-	-	-	2			-	-	-	-	-	2
85.38				-	-	-	-						
85.40			2	-	-	-	-			11			13
85.45	-	-	-	-	-	-	-		-	-	-	-	
85.50				-	-	-	-						
85.55	-	-	-	-	-	-	-		-	-	-	-	
85.60			2	-	-	-	-						2
85.70				-	-	-	-		-	-	-	-	
85.80	-	-	-	-	-	-	-		-	-	-	-	
85.90	-	-	-	-	-	-	-		-	-	-	-	
87.35	-	-	-	-	4			-	-	-	-	-	4
87.40	-	-	-	-				-	-	-	-	-	
87.45	-	-	-	-	-	45		-	-	-	-	-	45
87.50	-	-	-	-		3		-	-	-	-	-	3
87.55	-	-	-	-	-	6		-	-	-	-	-	6
87.60	-	-	-	-	3			-	-	-	-	-	3
87.65	-	-	-	-	-		-	-	-	-	-	-	
87.70	-	-	-	-	3			-	-	-	-	-	3
87.75	-	-	-	-	-		-	-	-	-	-	-	
87.80	-	-	-	-	3			-	-	-	-	-	3
87.90	-	-	-	-		-	-	-	-	-	-	-	
90.28		17		-		3							20
90.30				-			3						3
90.37	7			-	3	693	3				-		706
90.45				-	3	12							15
90.53			3	-			2			12			17
90.60		2	6	-							2		10
90.65	-	-	-	-	-			-	-	-	-	-	
90.70				-	9								9
90.75	-	-	-	-	-	6	-	-	-	-	-	-	6

Record of Saury Eggs, 1952 (cont'd)

Station number	5201 Jan.	5202 Feb.	5203 Mar.	5203 L.Mar.	5204 Apr.	5205 May	5206 June	5207 July	5208 Aug.	5209 Sept.	5210 Oct.	5211 Nov.	Total
90.80		3		-		2			-	-	-	-	5
90.90				-	2			9	-	-	-	-	11
90.100	-	-	-	-		-			-	-	-	-	
93.27				-									
93.30	4	17		-		16							37
93.35	-	-	-	-	-	13			-	-	-	-	13
93.40			10	-			6						16
93.45	-	-	-	-	-				-	-	-	-	
93.50	7		10	-		6							23
93.55	-	-	-	-	-				-	-	-	-	
93.60		3	3	-	3				-	-	-	-	9
93.65	-	-	-	-	-			-	-	-	-	-	
93.70				-			7		-	-	-	-	7
93.75	-	-	-	-	-		-	-	-	-	-	-	
93.80	-	-	-	-					-	-	-	-	
93.90	-	-	-	-		-	-		-	-	-	-	
97.30				-	-						-		
97.32				-		-	3		2				5
97.35	-	-	-	-	-	4		-	-	-	-	-	4
97.40		12		-	9	3							24
97.45	-	-	-	-	-		6		-	-	-	-	6
97.50	3		3	-			2	3					11
97.55	-	-	-	-	-	7			-	-	-	-	7
97.60			3	-		8	2		-	-	-	-	13
97.65	-	-	-	-	-			-	-	-	-	-	
97.70			4	-					-	-	-	-	4
97.75	-	-	-	-	-	3	-	-	-	-	-	-	3
97.80	-	-	-	-	8		3		-	-	-	-	11
97.90	-	-	-	-	3	8	7		-	-	-	-	18
100.29				-				3					3
100.30	-			-			2						2
100.35	-	-	-	-	-	-	3		-	-	-	-	3
100.40				-			10						10
100.45	-	-	-	-	-	14	18		-	-	-	-	32
100.50	1		9	-	3	20							33
100.55	-	-	-	-	-				-	-	-	-	
100.60	-			-	3		8						11
100.65	-	-	-	-	-		11	-	-	-	-	-	11
100.70				-	7		12						19
100.75	-	-	-	-	-		-	-	-	-	-	-	

Record of Saury Eggs, 1952 (cont'd)

Station number	5201 Jan.	5202 Feb.	5203 Mar.	5203 L.Mar.	5204 Apr.	5205 May	5206 June	5207 July	5208 Aug.	5209 Sept.	5210 Oct.	5211 Nov.	Total
100.80	1		3	-		2	28						34
100.90			13	-					-	-	-	-	13
100.100	-	-	-	-	3	-			-	-	-	-	3
103.30	-	-	-	-	7			-					7
103.35	-	-	-	-	20		8	-					28
103.40	-	-	-	-			8	-					8
103.45	-	-	-	-	-	25	-	-	-	-	-	-	25
103.50	-	-	-	-		3	14	-	-	-	-	-	17
103.55	-	-	-	-	-	NQ		-	-	-	-	-	
103.60	-	-	-	-	3		6	-	-	-	-	-	9
103.65	-	-	-	-	-	5		-	-	-	-	-	5
103.70	-	-	-	-				-	-	-	-	-	
103.75	-	-	-	-	-			-	-	-	-	-	
103.80	-	-	-	-				-	-	-	-	-	
103.90	-	-	-	-	3			-	-	-	-	-	3
105.32				-	-	-	-		-	-	-	-	
105.35				-	-	-	-	3	-	-	-	-	3
105.40			2	-	-	-	-		-	-	-	-	2
105.45	-	-	-	-	-	-	-		-	-	-	-	
105.50			5	-	-	-	-		-	-	-	-	5
105.55	-	-	-	-	-	-	-		-	-	-	-	
105.60				-	-	-	-		-	-	-	-	
105.70				-	-	-	-		-	-	-	-	
105.80	2		-	-	-	-	-		-	-	-	-	2
105.90	-	-	-	-	-	-	-		-	-	-	-	
107.32	-	-	-	-				-	3			2	5
107.35	-	-	-	-	3		6	-					9
107.40	-	-	-	-	16			-				-	16
107.45	-	-	-	-	-			-	-	-	-	-	
107.50	-	-	-	-				-	-	-	-	-	
107.55	-	-	-	-	-	-		-	-	-	-	-	
107.60	-	-	-	-	21			-	-	-	-	-	21
107.65	-	-	-	-	-	-		-	-	-	-	-	
107.70	-	-	-	-	10	8		-	-	-	-	-	18
107.80	-	-	-	-				-	-	-	-	-	
110.33			-	-									
110.35				-		6							6
110.40				-		3							3
110.45	-	-	-	-	-	10		-	-	-	-	-	10
110.50				-	3	7	22						32

Record of Saury Eggs, 1952 (cont'd)

Station number	5201 Jan.	5202 Feb.	5203 Mar.	5203 L.Mar.	5204 Apr.	5205 May	5206 June	5207 July	5208 Aug.	5209 Sept.	5210 Oct.	5211 Nov.	Total
110.55	-	-	-	-	-	-	4	-	-	-	-	-	4
110.60	-		2	-									2
110.65	-	-	-	-	-	-		-	-	-	-	-	
110.70	3			-		7	4		-	-	-	-	14
110.80			-	-	10				-	-	-	-	10
110.90			-	-		5			-	-	-	-	5
113.30	-												
113.35	-				3		17				-		20
113.40	-				3		19						22
113.45	-	-	-		-	8	21		-	-	-	-	29
113.50	-				-				-	-	-	-	
113.55	-	-	-		-		10		-	-	-	-	10
113.60	-						20	13	-	-	-	-	33
113.65	-	-	-				19	-	-	-	-	-	19
113.70	-		-			3	18		-	-	-	-	21
115.27		-	-	-	-	-	-	-			-	-	
115.30	-	-	-	-	-	-	-	-			-	-	
115.35		-	-	-	-	-	-	-			-	-	
115.40		-	-	-	-	-	-	-	-	-	-	-	
115.50		-	-	-	-	-	-	-	-	-	-	-	
115.60		-	-	-	-	-	-	-	-	-	-	-	
115.70		-	-	-	-	-	-	-	-	-	-	-	
117.26	-												
117.30	-					2							2
117.35	-				6	24	7				-	4	41
117.40	-												
117.45	-	-	-						-	-	-	-	
117.50	-								-	-	-	-	
117.55	-	-	-	3		18			-	-	-	-	21
117.60	-								-	-	-	-	
117.65	-	-	-			3		-	-	-	-	-	3
117.70	-		-		3		13		-	-	-	-	16
120.25		2											2
120.30		199											199
120.35													
120.37	-	-	-	-	-	-	-		-	-	-	-	
120.40	-	-	-						-	-	-	-	
120.45													
120.50													
120.55	-	-	-						-	-	-	-	
120.60		5											5

Station number	5201 Jan.	5202 Feb.	5203 Mar.	5203 L.Mar.	5204 Apr.	5205 May	5206 June	5207 July	5208 Aug.	5209 Sept.	5210 Oct.	5211 Nov.	Total
120.65	-	-	-		3			-	-	-	-	-	3
120.70					3								3
120.80					3								3
120.90			6		12								18
123.37													
123.40													
123.45	-	-	-						-	-	-	-	
123.50													
123.55	-	-	-					-	-	-	-	-	
123.60		5							-	-	-	-	5
127.34		-											
127.40		-				6		3				-	9
127.45	-	-	-						-	-	-	-	
127.50		-				3		20					23
127.55	-	-	-					-	-	-	-	-	
127.60			9						-	-	-	-	9
130.30													
130.35													
130.40					23								23
130.45	-	-	-		286		9		-	-	-	-	295
130.50					6								6
130.55	-	-	-		3			-	-	-	-	-	3
130.60													
130.70		-	-	-	-	-	-	-	-	-	-	-	
130.80		-	-	-	-	-	-	-	-	-	-	-	
133.25								-					
133.30													
133.35	-	-	-						-	-	-	-	
133.40							3		-	-	-	-	
133.45	-	-	-		17				-	-	-	-	3
133.50		-					NQ		-	-	-	-	17
133.60		-	-	5		-	-	-	-	-	-	-	5
137.23													
137.30													
137.35	-	-	-	-									
137.40									-	-	-	-	
137.45	-	-	-						-	-	-	-	
137.50				-					-	-	-	-	
137.60		-	-		5	-	-	-	-	-	-	-	5
Total	28	265	95	8	590	1032	408	85	5	23	2	0	2537

Record of Saury Eggs, 1953

Station number	5301 Jan.	5302 Feb.	5303 Mar.	5303 L.Mar.	5304 Apr.	5305 May	5306 June	5307 July	5308 Aug.	5309 Sept.	5310 Oct.	5311 Nov.	5312 Dec.	Total
60.55	-	-	-	-						-	-	-	-	
60.60	-	-	-	-			5			-	-	-	-	5
60.65	-	-	-	-	-		6	-	-	-	-	-	-	6
60.70	-	-	-	-			-	11	6	-	-	-	-	17
60.80	-	-	-	-	14		-			-	-	-	-	14
60.90	-	-	-	-			-		30	-	-	-	-	30
60.100	-	-	-	-	-	3	-			-	-	-	-	3
60.110	-	-	-	-	-	NQ	-	-	-	-	-	-	-	
60.120	-	-	-	-	-		-	-	-	-	-	-	-	
63.52	-	-	-	-						-	-	-	-	
63.55	-	-	-	-		55	3		-	-	-	-	-	58
63.60	-	-	-	-	-		3	-	-	-	-	-	-	3
63.65	-	-	-	-	-			-	-	-	-	-	-	
67.50	-	-	-	-		-		-		-	-	-	-	
67.53	-	-	-	-	-	-	-		-	-	-	-	-	
67.55	-	-	-	-		-				-	-	-	-	
67.60	-	-	-	-	-	-	30		-	-	-	-	-	30
67.65	-	-	-	-	-				6	-	-	-	-	6
70.51	-	-	-	-	37				-	-	-	-	-	37
70.55	-	-	-	-			12	26		-	-	-	-	38
70.60	-	-	-	-			6		6	-	-	-	-	12
70.65	-	-	-	-	-		18	-	-	-	-	-	-	18
70.70	-	-	-	-				6	6	-	-	-	-	12
70.80	-	-	-	-			6		6	-	-	-	-	12
70.90	-	-	-	-		16	17	-	-	-	-	-	-	33
70.100	-	-	-	-	-	6		-	-	-	-	-	-	6
70.110	-	-	-	-	-		-	-	-	-	-	-	-	
70.120	-	-	-	-	-	NQ	-	-	-	-	-	-	-	
73.50	-	-	-	-						-	-	-	-	
73.55	-	-	-	-	-	3	15		-	-	-	-	-	18
73.60	-	-	-	-		6	12			-	-	-	-	18
77.50	-	-	-	-						-	-	-	-	
77.55	-	-	-	-			6			-	-	-	-	6
77.60	-	-	-	-	-			10	-	-	-	-	-	10
77.65	-	-	-	-				3		-	-	-	-	3
80.51				-						-	-	-	-	
80.55	NQ			-						-	-	-	-	
80.60				-			37		7	-	-	-	-	44
80.65	-	-	-	-	-	-	3	-	-	-	-	-	-	3
80.70				-		6		6		-	-	-	-	12
80.80				-						-	-	-	-	
80.90		-		-						-	-	-	-	

Record of Saury Eggs, 1953 (cont'd)

Station number	5301 Jan.	5302 Feb.	5303 Mar.	5303 L.Mar.	5304 Apr.	5305 May	5306 June	5307 July	5308 Aug.	5309 Sept.	5310 Oct.	5311 Nov.	5312 Dec.	Total
80.100		-		-		4				-	-	-	-	4
80.110	-	-	-	-	6		-	-	-	-	-	-	-	6
80.120	-	-	-	-			-	-	-	-	-	-	-	
80.130	-	-	-	-			-	-	-	-	-	-	-	
80.138	-	-	-	-	-		-	-	-	-	-	-	-	
80.145	-	-	-	-			-	-	-	-	-	-	-	
80.152	-	-	-	-	5		-	-	-	-	-	-	-	5
80.160	-	-	-	-			-	-	-	-	-	-	-	
81.46	-	-	-	-	-	-	-	-	-		-			
82.47	-	-	-	-	-	-	-	-	-					
83.40	-			-										
83.43				-		2								2
83.48				-		4	4	10						18
83.51				-	9		4	43						56
83.55			20	-	7	2			10	12				51
83.60				-				14		-	-			14
83.65	-	-	-	-	-	-	8	-	-	-	-	-	-	8
83.70	-	-	-	-	3	2		-	-	-	-	-	-	5
83.80	-	-	-	-		20	30	-	-	-	-	-	-	50
83.90	-	-	-	-	6			-	-	-	-	-	-	6
85.39				-	2	312	87				-	4		405
85.40				-		4				6	-			10
85.45				-	5	44		24			-			73
85.50	6			-	5	4	3				-			18
85.55				-			6				-		-	6
85.60	178			-			2			-	-		-	180
87.35				-					2	4	-			6
87.40				-	15	12					-			27
87.45	-		3	-		10	28				-			41
87.50	-			-	10		126	4			-	-		140
87.55				-		4		35			-			39
87.60			-	-		4	10				-		-	14
87.65	-	-	-	-	-	-	5	-	-	-	-	-	-	5
87.70	-	-	-	-		6	13	-	-	-	-	-	-	19
87.80	-	-	-	-	3	2	-	-	-	-	-	-	-	5
87.90	-	-	-	-	9			-	-	-	-	-	-	9
90.28				-		5			-	-		-		5
90.30		11		-			10			-		-		21
90.35	-	-	-	-	-	4	-	-	-	-	-	-	-	4
90.37			86	-	14	-	17			-		-		117
90.41	-	-	-	-	-	27	-	-	-	-	-	-	-	27
90.45			7	-		6	126		9	-		-		148

Record of Saury Eggs, 1953 (cont'd)

Station number	5301 Jan.	5302 Feb.	5303 Mar.	5303 L.Mar.	5304 Apr.	5305 May	5306 June	5307 July	5308 Aug.	5309 Sept.	5310 Oct.	5311 Nov.	5312 Dec.	Total
90.50	-	-		-	-	6	40	3	2	-		-		51
90.53			-	-	-	-	-	-	-	-	-	-	-	
90.55	-	-	26	-			6			-		-		32
90.58	-	-	-	-	-	-	-	-	36	-	-	-	-	36
90.60			4	-		6			6	-		-		16
90.65	-	-	-	-	-	-		-	-	-	-	-	-	
90.70			20	-	5	4	NQ	70	46	-		-	-	145
90.80				-			3	-	-	-	-	-	-	3
90.90	2	-		-	3			-	-	-	-	-	-	5
90.100	-	-	-	-				-	-	-	-	-	-	
90;110	-	-	-	-	4		-	-	-	-	-	-	-	4
90.120	-	-	-	-			-	-	-	-	-	-	-	
90.130	-	-	-	-			-	-	-	-	-	-	-	
90.138	-	-	-	-	5		-	-	-	-	-	-	-	5
90.145	-	-	-	-			-	-	-	-	-	-	-	
90.153	-	-	-	-	-	7	-	-	-	-	-	-	-	7
90.160	-	-	-	-	8		-	-	-	-	-	-	-	8
93.27			-	-			17			-		-		17
93.30			3	-						-		-		3
93.35	-	-	-	-				23		-	-	-	-	23
93.40		24	NQ	-	6		3	2		-		-		35
93.45	-	-	-	-	82		17		-	-	-	-	-	99
93.50		11		-	14	16		66		-		-		107
93.55	-	-	-	-	16	-	12	-	-	-	-	-	-	28
93.60	NQ		-	-	2	5		-	-	-	-	-	-	7
93.65	-	-	-	-	-	-		-	-	-	-	-	-	
93.70	-	-	-	-	9	-		-	-	-	-	-	-	9
93.80	-	-	-	-		-		-	-	-	-	-	-	
93.90	-	-	-	-		-	3	-	-	-	-	-	-	3
97.30				-	6	6	71	6		-		-		89
97.32			-	-	-	-	-	-	-	-	-	-	-	
97.35	-	-		-	6	25	10	72		-		-		113
97.38	-	-	-	-	-	-	-	-		-	-	-	-	
97.40	3	3	3	-	6	6		3	14	-	3	-		41
97.45	-	-	-	-	4	7	13	3	-	-	-	-	-	27
97.50		65	-	-	38			12		-		-		115
97.55	-	-	-	-	6	-	-	-	-	-	-	-	-	6
97.60	25	13	-	-	25	7	11	-	-	-	-	-	-	81
97.65	-	-	-	-	-	-	3	-	-	-	-	-	-	3
97.70	-	-	-	-				-	-	-	-	-	-	
97.80	-	-	-	-		-		-	-	-	-	-	-	
97.90	-	-	-	-		-		-	-	-	-	-	-	

Record of Saury Eggs, 1953 (cont'd)

Station number	5301 Jan.	5302 Feb.	5303 Mar.	5303 L.Mar.	5304 Apr.	5305 May	5306 June	5307 July	5308 Aug.	5309 Sept.	5310 Oct.	5311 Nov.	5312 Dec.	Total
100.29				-		8	6			-		-		14
100.30		2		-						-		-		2
100.35	-	-	-	-	16					-	-	-	-	16
100.40			6	-		3			7	-		-		16
100.45	-	-	-	-	3				-	-	-	-	-	3
100.50		5		-	3	7			6	-		-		21
100.55	-	-	-	-	14		5	-		-	-	-	-	19
100.60				-						-		-		
100.65	-	-	-	-	-	-	20	-	-	-	-	-	-	20
100.70		55	3	-	3					-		-		61
100.80				-			6			-	-	-		6
100.90	3	-	-	-		3	11	-	-	-	-	-	-	17
100.100	-	-	-	-	-	-		-	-	-	-	-	-	
103.30	-	-	-	-						-		-		
103.35	-	-	-	-	6					-		-		6
103.40	-	-	-	-						-		-		
103.45	-	-	-	-	2	3		-	-	-	-	-	-	5
103.50	-	-	-	-			6	-	-	-	-	-	-	6
103.55	-	-	-	-				-	-	-	-	-	-	
103.60	-	-	-	-				-	-	-	-	-	-	
103.65	-	-	-	-	-	-		-	-	-	-	-	-	
103.70	-	-	-	-				-	-	-	-	-	-	
103.80	-	-	-	-				-	-	-	-	-	-	
103.90	-	-	-	-				-	-	-	-	-	-	
105.32				-	-	-	-	-	-	-	-	-	-	
105.35	2			-	-	-	-	-	-	-	-	-	-	2
105.40			26	-	-	-	-	-	-	-	-	-	-	26
105.50				-	-	-	-	-	-	-	-	-	-	
105.60	4			-	-	-	-	-	-	-	-	-	-	4
105.70	8	-		-	-	-	-	-	-	-	-	-	-	8
105.80	9	-		-	-	-	-	-	-	-	-	-	-	9
107.32	-	-	-	-						-		-		
107.35	-	-	-	-						-		-		
107.40	-	-	-	-		7				-		-		7
107.45	-	-	-	-				-	-	-	-	-	-	
107.50	-	-	-	-		9		-	-	-	-	-	-	9
107.55	-	-	-	-	10			-	-	-	-	-	-	10
107.60	-	-	-	-	3			-	-	-	-	-	-	3
107.65	-	-	-	-	-	-	2	-	-	-	-	-	-	2
107.70	-	-	-	-				-	-	-	-	-	-	
107.80	-	-	-	-	3		-	-	-	-	-	-	-	3
107.90	-	-	-	-			-	-	-	-	-	-	-	

Record of Saury Eggs, 1953 (cont'd)

Station number	5301 Jan.	5302 Feb.	5303 Mar.	5303 L.Mar.	5304 Apr.	5305 May	5306 June	5307 July	5308 Aug.	5309 Sept.	5310 Oct.	5311 Nov.	5312 Dec.	Total
110.33	-			-		2		5		-		-		7
110.35	-			-	5	10				-		-		15
110.40	-	6	6	-			3			-		-		15
110.45	-	-	-	-				-	-	-	-	-	-	
110.50				-			6			-		-		6
110.55	-	-	-	-				-	-	-	-	-	-	
110.60				-						-		-		
110.65	-	-	-	-	-	-		-	-	-	-	-	-	
110.70		-	3	-				-	-	-	-	-	-	3
110.80		-	-	-			-	-	-	-	-	-	-	
110.90	-	-	-	-			-	-	-	-	-	-	-	
113.30	-					2						-		2
113.35		24	5									-		29
113.40	-			12						-		-		12
113.45	-	-	10		6	6		-	-	-	-	-	-	22
113.50						9		-	-	-	-	-	-	9
113.55	-	-			3			-	-	-	-	-	-	3
113.60	-							-	-	-	-	-	-	
113.65	-	-	-	-	-	-		-	-	-	-	-	-	
113.70	-	-	-					-	-	-	-	-	-	
115.26	-	-	-	-	-	-	-	-	-		-	-	-	
115.30	-	-	-	-	-	-	-	-	-		-	-	-	
115.35	-	-	-	-	-	-	-	-	-		-	-	-	
117.26	-											-		
117.30	-				6							-		6
117.35	-		14									-	-	14
117.40									2			-	-	2
117.45	-	-		18	6		19	-	-	-	-	-	-	43
117.50							3	-	-	-	-	-	-	3
117.55	-	-		3	94		6	-	-	-	-	-	-	103
117.60	-			6	3			-	-	-	-	-	-	9
117.65	-	-	-	-	-	-	2	-	-	-	-	-	-	2
117.70	-	-	-		9	8		-	-	-	-	-	-	17
120.25			2	4								-		6
120.30			5				5					-		10
120.35			8									-		8
120.40	-	-					5	-	-	-	-	-	-	5
120.45					3		6		4	-		-		13
120.50										-		-		
120.55	-	-			3	5	2	-	-	-	-	-	-	10
120.60				3	3	6				-		-		12

Record of Saury Eggs, 1953 (cont'd)

Station number	5301 Jan.	5302 Feb.	5303 Mar.	5303 L.Mar.	5304 Apr.	5305 May	5306 June	5307 July	5308 Aug.	5309 Sept.	5310 Oct.	5311 Nov.	5312 Dec.	Total
120.65	-	-	-	-	-	-		-	-	-	-	-	-	
120.70			-		4					-		-		4
120.80			-							-		-		
120.90	-	-	-			3				-		-		3
123.37										-		-		
123.40	-								5	-		-		5
123.45	-								4	-	-	-	-	4
123.50	-					12			6	-		-		18
123.55	-	-				3		-	-	-	-	-	-	3
123.60	-	-				2		-	-	-	-	-	-	2
127.34						8	3			-		-		11
127.40	-					72				-		-		72
127.45	-									-	-	-	-	
127.50	-									-		-		
127.55	-	-						-	-	-	-	-	-	
127.60	-	-						-	-	-	-	-	-	
130.30	-							-		-		-		
130.35								3		-		-		3
130.40						5				-		-		5
130.45	-					20	6			-	-	-	-	26
130.50	-						31			-		-		31
130.55	-	-					2	-	-	-	-	-	-	2
130.60										-	NQ	-		
133.25										-		-		
133.30										-		-		
133.35	-	-								-	-	-	-	
133.40										-		-		
133.45	-	-			3			-	-	-	-	-	-	3
133.50		-					16	-	-	-	-	-	-	16
133.55	-	-	-				-	-	-	-	-	-	-	
133.60	-	-	-				-	-	-	-	-	-	-	
137.23										-		-		
137.30										-	-	-		
137.35	-	-						-	-	-	-	-	-	
137.40		-						-	-	-	-	-	-	
137.45	-	-						-	-	-	-	-	-	
137.50		-					2	-	-	-	-	-	-	2
137.55	-	-	-				-	-	-	-	-	-	-	
137.60	-	-	-				-	-	-	-	-	-	-	
Total	240	219	260	46	606	881	1040	460	226	22	3	4	0	4007

Record of Saury Eggs, 1954

Station number	5401 Jan.	5402 Feb.	5403 Mar.	5404 Apr.	5405 May	5406 June	5407 July	5408 Aug.	5410 Oct.	5412 Dec.	Total
50.47	-	-	-	-	-		-	-	-	-	
50.50	-	-	-	-	-		-	-	-	-	
50.60	-	-	-	-	-		-	-	-	-	
50.70	-	-	-	-	-	14	-	-	-	-	14
50.80	-	-	-	-	-	27	-	-	-	-	27
50.90	-	-	-	-	-	25	-	-	-	-	25
50.100	-	-	-	-	-	5	-	-	-	-	5
53.52	-	-	-	-	-		-	-	-	-	
53.55	-	-	-	-	-		-	-	-	-	
53.65	-	-	-	-	-	8	-	-	-	-	8
57.51	-	-	-	-	-		-	-	-	-	
57.55	-	-	-	-	-		-	-	-	-	
57.65	-	-	-	-	-	6	-	-	-	-	6
60.55	-	-	-						-	-	
60.60	-	-	-	4					-	-	4
60.70	-	-	-	7		27			-	-	34
60.80	-	-	-		105	21			-	-	126
60.90	-	-	-	2					-	-	2
60.100	-	-	-	-	-				-	-	
63.52	-	-	-						-	-	
63.55	-	-	-			9			-	-	9
63.65	-	-	-	-	-		-	-	-	-	
67.50	-	-	-						-	-	
67.55	-	-	-			12			-	-	12
67.65	-	-	-	-	-				-	-	
70.51	-	-	-	-					-	-	
70.55	-	-	-		10				-	-	10
70.60	-	-	-	6	108				-	-	114
70.70	-	-	-		4	19			-	-	23
70.80	-	-	-	-	5				-	-	5
70.90	-	-	-	5	5	27	-	-	-	-	37
70.100	-	-	-	-	-		-	-	-	-	
73.50	-	-	-		4		-		-	-	4
73.55	-	-	-	-	-	-	-		-	-	
73.60	-	-	-		29	12	-		-	-	41
77.50	2		12							-	14
77.55	2		12	44	39		23			-	120
77.65	-	-	-	10	35	NQ	10		-	-	55
80.51			2			2	6				10
80.55				4							4
80.60				15	40						55
80.70			4		30	NQ					34

Record of Saury Eggs, 1954 (cont'd)

Station number	5401 Jan.	5402 Feb.	5403 Mar.	5404 Apr.	5405 May	5406 June	5407 July	5408 Aug.	5410 Oct.	5412 Dec.	Total
80.80	2		8	22	18		3				53
80.90	3	-	4	5		3					15
80.100		-	-	-	-		-		-	-	
80.110		-	-	-	-	-	-	-	-	-	
82.47				3							3
83.40											
83.43											
83.48				2							2
83.51			3	5	3						11
83.55				5	11						16
83.60			22	6	34		12				74
83.70	-	-	-	6			-	-	-	-	6
83.80	-	-	-		3		-	-	-	-	3
83.90	-	-	-	11			-	-	-	-	11
85.39	-						NQ				
85.40						-					
85.45											
85.50											
85.55	3			10							13
85.60	2	3	25		6						36
87.35					4	6					10
87.40						3			-		3
87.45		3		3		58					64
87.50				2	2						4
87.55			14		4						18
87.60		32		6							38
87.70	-	-	-	5		-	-	-	-	-	5
87.80	-	-	-	8			-	-	-	-	8
87.90	-	-	-	2	3		-	-	-	-	5
90.28			3	28		6					37
90.30		6		8							14
90.33	-	-	-	-		2	-	-	-	-	2
90.37				3							3
90.41	-	-	-	-	13	2	-	-	-	-	15
90.45											
90.50	-	-	-	-	10		-	-			10
90.55		88		11	3					-	102
90.60	6	15		12	12						45
90.70			2								2
90.80			-			7	-	-	-	-	7
90.90		-	-			-	-	-	-	-	
90.100		-	-	-	-	-	-	-	-	-	

Record of Saury Eggs, 1954 (cont'd)

Station number	5401 Jan.	5402 Feb.	5403 Mar.	5404 Apr.	5405 May	5406 June	5407 July	5408 Aug.	5410 Oct.	5412 Dec.	Total
90.110		-	-	-	-	-	-	-	-	-	
93.27											
93.30											
93.35	-	-	-						-	-	
93.40						NQ					
93.45	-	-	-							-	
93.50			-	9	3						12
93.55	-	-	-	4			-	-		-	4
93.60	242		-				-	-	-	-	242
93.70	-	-		21			-	-	-	-	21
93.80	-	-	-	3		-	-	-	-	-	3
93.90	-	-	-	3		NQ	-	-	-	-	3
97.30			5								5
97.32											
97.35	-	-	-	-			-	-	-	-	
97.40											
97.45	-	-	-			3				-	3
97.50			32		3						35
97.55	-	-	-	3			-	-		-	3
97.60			14		4		-	-	-	-	18
97.70	-	-			3		-	-	-	-	3
97.80	-	-	-				-	-	-	-	
97.90	-	-	-	3			-	-	-	-	3
100.29			1								1
100.30											
100.35	-	-							-	-	
100.40			2								2
100.45	-	-								-	
100.50						8				NQ	8
100.55	-	-					-	-		-	
100.60				3							3
100.70	14										14
100.80					52			-		NQ	52
100.90		-					-	-			
100.100	-	-	-			-	-	-	-	-	
103.30		36					3				39
103.35		146									146
103.40											
103.45	-	24					-	-	-	-	24
103.50	3		2				-	-	-	-	5
103.55	-	-				15	-	-	-	-	15
103.60		13					-	-	-	-	13

Record of Saury Eggs, 1954 (cont'd)

Station number	5401 Jan.	5402 Feb.	5403 Mar.	5404 Apr.	5405 May	5406 June	5407 July	5408 Aug.	5410 Oct.	5412 Dec.	Total
103.70	-	-	-				-	-	-	-	
103.80	-	-	-				-	-	-	-	
103.90	-	-	-	-		-	-	-	-	-	
107.32											
107.35		28									28
107.40		7									7
107.45	-			3			-	-	-	-	3
107.50	-				7	20	-	-	-	-	27
107.55	-	-					-	-	-	-	
107.60							-	-	-	-	
107.70	-	-	-	3			-	-	-	-	3
107.80	-	-	-			-	-	-	-	-	
110.33			22								22
110.35											
110.40			34		6						40
110.45	-									-	
110.50											
110.55	-	-					-	-		-	
110.60	2										2
110.70		-		2			-	-	-	-	2
110.80		-					-	-	-	-	
110.90		-	-	3		-	-	-	-	-	3
110.100		-	-	-	-	-	-	-	-	-	
113.30			34								34
113.32	-	-					-	-	-	-	
113.35				3						5	8
113.37	-	-					-	-	-	-	
113.40										92	92
113.42	-	-			137		-	-	-	-	137
113.45	-						-	-	-	-	
113.47	-	-					-	-	-	-	
113.50							-	-	-		
113.55	-	-					-	-	-	-	
113.60	-						-	-	-		
113.70	-	-	-				-	-	-	-	
117.26		-									
117.28	-	-	1				-	-	-	-	1
117.30				3							3
117.32	-	-		6			-	-	-	-	6
117.35		28									28
117.37	-	-					-	-	-	-	
117.40		34				3					37

Record of Saury Eggs, 1954 (cont'd)

Station number	5401 Jan.	5402 Feb.	5403 Mar.	5404 Apr.	5405 May	5406 June	5407 July	5408 Aug.	5410 Oct.	5412 Dec.	Total
117.42	-	-				17	-	-	-	-	17
117.45	-					48	-	-	-	-	48
117.47	-	-	3			9	-	-	-	-	12
117.50				3			-	-	-		3
117.55	-		3			3	-	-	-	-	6
117.60	-		4				-	-	-		4
117.70	-	-	-	3		10	-	-	-	-	13
120.25			1								1
117.27	-	-	-				-	-	-	-	
120.30											
120.32	-	-		16			-	-	-	-	16
120.35											
120.37	-						-	-	-	-	
120.40	-					2	-	-	-		2
120.42	-						-	-	-	-	
120.45											
120.47	-	-					-	-	-	-	
120.50											
120.55	-	3	58			27	-	-	NQ	-	88
120.60		2	18								20
120.70			7			10					17
120.80			6	-							6
120.90	-	-	5	-							5
120.120		-	-	-	-	-	-	-	-	-	
123.37				6							6
123.40				15							15
123.42	-	9			29		-	-	-	-	38
123.45	-				21						21
123.47	-	-	3		49		-	-	-	-	52
123.50		11		7	19						37
123.55	-	-			58		-	-			58
123.60		-		11	11		-	-	-	-	22
127.34					3				NQ		3
127.37	-	-			26		-	-	-	-	26
127.40					59	-					59
127.42	-	-			82		-	-	-	-	82
127.45	-	3									3
127.47	-	-		6			-	-	-	-	6
127.50											
127.55	-	-		5			-	-			5
127.60	9	-					-	-	-	-	9
130.30					4						4

Record of Saury Eggs, 1954 (cont'd)

Station number	5401 Jan.	5402 Feb.	5403 Mar.	5404 Apr.	5405 May	5406 June	5407 July	5408 Aug.	5410 Oct.	5412 Dec.	Total
130.35											
130.40											
130.45	-									-	
130.50	3										3
130.55	-						-	-		-	
130.60	4										4
130.110		-	-	-	-	-	-	-	-	-	
133.25											
133.30					12						12
133.35	-								-	-	
133.40					3				-	-	3
133.45	-	-			3		-	-	-	-	3
133.50		-					-	-	-	-	
133.60	-	-	-		3	-	-	-	-	-	3
137.23											
137.30											
137.35	-	-					-	-	-	-	
137.40		-					-	-	-	-	
137.45	-	-					-	-	-	-	
137.50		-					-	-	-	-	
137.60	-	-	-			-	-	-	-	-	
137.140		-	-	-	-	-	-	-	-	-	
140.30		-	-	-	-	-	-	-	-		
140.35		-	-	-	-	-	-	-	-		
140.40		-	-	-	-	-	-	-	-		
140.50		-	-	-	-	-	-	-	-	-	
143.26		-	-	-	-	-	-	-	-		
143.30		-	-	-	-	-	-	-	-		
143.35		-	-	-	-	-	-	-	-		
147.20		-	-	-	-	-	-	-	-		
147.25		-	-	-	-	-	-	-	-		
147.30		-	-	-	-	-	-	-	-		
150.19		-	-	-	-	-	-	-	-		
150.25		-	-	-	-	-	-	-	-		
150.30		-	-	-	-	-	-	-	-		
153.16	-	-	-	-	-	-	-	-	-		
153.20	-	-	-	-	-	-	-	-	-		
153.30	-	-	-	-	-	-	-	-	-		
157.10	-	-	-	-	-	-	-	-	-		
157.20	-	-	-	-	-	-	-	-	-		
157.30	-	-	-	-	-	-	-	-	-		
Total	297	491	366	404	1137	476	57	0	0	97	3325

Record of Saury Eggs, 1955

Station number	5501 Jan.	5502 Feb.	5503 Mar.	5504 Apr.	5505 May	5506 June	5507 July	5508 Aug.	5510 Oct.	5512 Dec.	Total
60.55	-	-	-	-	-		-			-	
60.60	-	-	-	-	-		-	-		-	
60.70	-	-	-	-	-		-			-	
60.80	-	-	-	-	-		-	-		-	
60.90	-	-	-	-	-		-			-	
63.52	-	-	-	-				-		-	
63.55	-	-	-	-				-		-	
63.65	-	-	-	-				-	-	-	
67.50	-	-	-	-				-		-	
67.55	-	-	-	-				-		-	
67.65	-	-	-	-		6		-	-	-	6
70.51	-	-	-	-				-		-	
70.55	-	-	-	-						-	
70.60	-	-	-	-	6			-		-	6
70.70	-	-	-	-						-	
70.80	-	-	-	-	-			-		-	
70.90	-	-	-	-	-					-	
73.50	-	-	-	-	-			-		-	
73.60	-	-	-	-	-	11		-		-	11
73.70	-	-	-	-	-			-	-	-	
73.80	-	-	-	-	-			-	-	-	
73.90	-	-	-	-	-			-	-	-	
77.50	-	-	-	-	7			-		-	7
77.55	-	-	-	-	5			-	-	-	5
77.65	-	-	-	-	40			-	-	-	40
77.70	-	-	-	-				-	-	-	
77.80	-	-	-	-		5		-	-	-	5
77.90	-	-	-	-		4		-	-	-	4
80.51		-						-			
80.55											
80.60			2	6							8
80.70		3			16						19
80.80		3			6			-			9
80.90	-	-	-	3	6	179					188
83.40		2						-			2
83.43								-			
83.51					3			-			3
83.55	-	-	-	-	-			-	-	-	
83.60		3			3			-			6
83.65	-	-	-	-	-			-	-	-	

Record of Saury Eggs, 1955 (cont'd)

Station number	5501 Jan.	5502 Feb.	5503 Mar.	5504 Apr.	5505 May	5506 June	5507 July	5508 Aug.	5510 Oct.	5512 Dec.	Total
83.70	-	-	-		3			-	-	-	3
83.75	-	-	-	-	-		-	-	-	-	
83.80	-	-	-	3	-	26	-	-	-	-	29
83.85	-	-	-	-	-		-	-	-	-	
83.90	-	-	-	5	-		-	-	-	-	5
87.35					355			-			355
87.40		3			10			-	3		16
87.45	-	-	-	-	1273			-	3	-	1276
87.50		3		2				-			5
87.55	-	-	-	-	8			-	-	-	8
87.60		55	-	3	9	14		-			81
87.65	-	-	-	-	-			-	-	-	
87.70	-	-	-		-	15		-	-	-	15
87.75	-	-	-	-	-		-	-	-	-	
87.80	-	-	-	797	-		NQ	-	-	-	797
87.85	-	-	-	-	-		-	-	-	-	
87.90	-	-	-		-		-	-	-	-	
90.28											
90.30			22	3		12					37
90.37											
90.45				3	128			-			131
90.50								-	-	-	
90.55	-	-	-	-	6	6		7			19
90.60					3			-			3
90.65	-	-	-	-				-	-	-	
90.70		3									3
90.75	-	-	-	-				-	-	-	
90.80	-	-	6			-		-			6
90.85	-	-	-		6	-		-	-	-	6
90.90	-	-		16	3	-		-		-	19
93.27							3625	-			3625
93.30							590	-	79		669
93.35	-	-	-	-				-	-	-	
93.40		132						-			132
93.45	-	-	-	-				-	-	-	
93.50		6		43				-			49
93.55	-	-	-	-				-	-	-	
93.60	-	-						-		-	
93.65	-	-	-	-				-	-	-	
93.70	-	-						-	-	-	

Record of Saury Eggs, 1955 (cont'd)

Station number	5501 Jan.	5502 Feb.	5503 Mar.	5504 Apr.	5505 May	5506 June	5507 July	5508 Aug.	5510 Oct.	5512 Dec.	Total
93.75	-	-	-	-	3			-	-	-	3
93.80	-	-	-	336	36			-	-	-	372
93.85	-	-	-	-		-		-	-	-	
93.90	-	-	-	43		-		-	-	-	43
93.95	-	-	-	-		-	-	-	-	-	
97.30							103	-			103
97.32								-			
97.35	-	-	-	-				-	-	-	
97.40					3	6		-			9
97.45	-	-	-	-				-	-	-	
97.50		172						-			172
97.55	-	-	-	-				-	-	-	
97.60	-	-				-		-		-	
97.65	-	-	-	-		-		-	-	-	
97.70	-	-				-		-	-	-	
97.75	-	-	-	-		-		-	-	-	
97.80	-	-	-		425	-		-	-	-	425
97.85	-	-	-	-		-		-	-	-	
97.90	-	-	-		14	-		-	-	-	14
100.29											
100.30				2				-			2
100.35	-	-	-	-				2	-	-	2
100.40								-			
100.45	-	-	-	-				-	-	-	
100.50			3								3
100.55	-	-	-	-				-	-	-	
100.60						-		-			
100.65	-	-	-	-		-		-	-	-	
100.70						-					
100.75	-	-	-	-		-		-	-	-	
100.80	35					-		-			35
100.85	-	-	-	-	19	-		-	-	-	19
100.90	-	-				-			-	-	
103.30								-			
103.35								-			
103.40		3						-			3
103.45	-	-	-					-	-	-	
103.50								-	-		
103.55	-	-	-					-	-	-	
103.60								-	-		

Record of Saury Eggs, 1955 (cont'd)

Station number	5501 Jan.	5502 Feb.	5503 Mar.	5504 Apr.	5505 May	5506 June	5507 July	5508 Aug.	5510 Oct.	5512 Dec.	Total
103.65	-	-	-					-	-	-	
103.70	-	-						-	-	-	
103.75	-	-	-					-	-	-	
103.80	-	-	-					-	-	-	
103.85	-	-	-	-				-	-	-	
103.90	-	-	-	-				-	-	-	
107.32								-			
107.35								-			
107.40								-			
107.45	-	-	-	-				-	-	-	
107.50								-	-		
107.55	-	-	-	-				-	-	-	
107.60								-	-		
107.65	-	-	-	-				-	-	-	
107.70	-	-			6			-	-	-	6
107.75	-	-	-	-				-	-	-	
107.80	-	-	-					-	-	-	
107.85	-	-	-	-				-	-	-	
107.90	-	-	-	-				-	-	-	
110.33											
110.35											
110.40											
110.45	-	-	-	-				-	-	-	
110.50								-			
110.55	-	-	-	-				-	-	-	
110.60											
110.65	-	-	-	-				-	-	-	
110.70								-			
110.75	-	-	-	-				-	-	-	
110.80				1		3		-			4
110.85	-	-	-	-				-	-	-	
110.90	-	-								-	
113.30								-			
113.35								-			
113.40								-			
113.45	-							-	-	-	
113.50								-	-		
113.55	-	3						-	-	-	3
113.60		40						-	-		40
113.65	-	-	-	-				-	-	-	

Record of Saury Eggs, 1955 (cont'd)

Station number	5501 Jan.	5502 Feb.	5503 Mar.	5504 Apr.	5505 May	5506 June	5507 July	5508 Aug.	5510 Oct.	5512 Dec.	Total
113.70	-	9			4			-	-		13
113.75	-	-	-	-	6			-	-	-	6
113.80	-	-	-	2	10			-	-	-	12
117.26								-			
117.30								-			
117.35								-			
117.40								-			
117.45	-							-	-	-	
117.50								-	-		
117.55	-			6				-	-	-	6
117.60								-	-		
117.65	-	-	-	-				-	-	-	
117.70	-			4				-	-	-	4
117.75	-	-	-	-				-	-	-	
117.80	-	-	-					-	-	-	
120.25								-			
120.27	-	-	-	-			-	-		-	
120.30	6		3		9			-			18
120.35								-			
120.40			3					-	-		3
120.45											
120.50		4						-			4
120.55	-							-	-		
120.60				1	-						1
120.70				2				-		3	5
120.80				2						-	2
120.90				-	-	-	-	-		-	
120.100				-	-	-	-		-	-	
123.37								-			
123.40								-			
123.45					10			-	-	-	10
123.50								-			
123.55								-	-		
123.60	-	-			5			-		-	5
127.34								-			
127.40								-			
127.45								-	-	-	
127.50				6				-			6
127.55								-	-		
127.60	-	-						-		-	
130.30								-			

Record of Saury Eggs, 1955 (cont'd)

Station number	5501 Jan.	5502 Feb.	5503 Mar.	5504 Apr.	5505 May	5506 June	5507 July	5508 Aug.	5510 Oct.	5512 Dec.	Total
130.35								-			
130.40											
130.50					7						7
130.60								-		-	
133.25								-			
133.30								-			
133.40					-			-	-	-	
133.50	-	-						-	-		
133.60	-	-		-	-	-	-	-	-	-	
137.23								-			
137.30								-			
137.40								-	-		
137.50	-	-						-	-	-	
137.60	-	-		-	-	-	-	-	-	-	
140.30				-	-	-	-	-	-		
140.35				-	-	-	-	-	-		
140.40				-	-	-	-		-		
140.50	-	-		-	-	-	-		-	-	
143.26				-	-	-	-	-	-		
143.30				-	-	-	-	-	-		
143.35				-	-	-	-	-	-		
143.40	-	-		-	-	-	-	-	-	-	
143.50	-	-		-	-	-	-	-	-	-	
147.20				-	-	-	-	-	-		
147.25				-	-	-	-	-	-		
147.30				-	-	-	-	-	-		
147.40	-	-		-	-	-	-	-	-	-	
150.19				-	-	-	-	-	-		
150.25				-	-	-	-		-		
150.30				-	-	-	-	-	-		
150.40	-	-		-	-	-	-		-	-	
153.16				-	-	-	-	-	-	-	
153.20				-	-	-	-	-	-	-	
153.30				-	-	-	-	-	-	-	
153.40	-	-		-	-	-	-	-	-	-	
157.10				-	-	-	-	-	-	-	
157.20				-	-	-	-	-	-	-	
157.30				-	-	-	-	-	-	-	
157.40	-	-		-	-	-	-	-	-	-	
Total	41	444	39	1289	2453	287	4318	9	85	3	8968

Visual Observations of Saury Abundance, 1951

Night stations occupied	5109	5110	5111	5112	Number of observations	Average weighted abundance
60.60	0	0	0	VA	4	25.0
60.70	0	0	0	0	4	0
60.100	-	-	0	-	1	0
63.52	-	-	-	C	1	10.0
63.55	-	-	-	C	1	10.0
63.65	-	-	-	RC	1	10.0
67.55	-	-	RC	-	1	10.0
67.65	-	-	0	-	1	0
70.51	-	-	-	C	1	10.0
70.60	0	0	-	C	3	3.3
70.70	0	0	0	-	3	0
70.80	-	-	0	-	1	0
73.50	-	-	0	-	1	0
73.60	-	-	0	RC	2	5.0
77.50	VA	VA	X	-	3	67.0
77.55	VC	RC	X	X	4	28.0
77.65	-	-	-	RC	1	10.0
80.51	0	-	VC	X	3	33.7
80.55	-	-	-	0	1	0
80.70	-	-	X	0	2	0.5
80.72	-	N	-	-	0	0
80.80	0	0	-	0	3	0
80.90	0	-	-	-	1	0
80.100	-	X	0	-	2	0.5
83.43	-	-	C	VC	2	55.0
83.55	-	A	-	-	1	100.0
83.60	-	VA	-	-	1	100.0
85.38	RC	0	X	RR	4	3.0
85.60	-	X	X	RC	3	4.0
90.28	-	0	C	-	2	5.0
90.30	-	0	RC	VC	3	36.7
90.37	-	-	-	VC	1	100.0
90.45	-	-	0	-	1	0
90.53	0	0	-	N	2	0
90.60	0	0	-	N	2	0
90.70	-	X	RC	-	2	5.5
93.27	X	0	RC	-	3	3.7
93.30	C	-	C	X	3	7.0
93.40	-	-	-	N	0	0
93.50	-	X	-	0	2	0.5
97.30	-	0	X	0	3	0.3
97.32	-	-	C	0	2	5.0
97.40	RR	-	A	0	3	33.7
97.50	0	0	0	-	3	0
100.29	-	0	-	0	2	0
100.30	RC	VA	-	0	3	36.7
100.40	RC	-	VA	-	2	55.0

Visual Observations of Saury Abundance, 1951 (cont'd)

Night stations occupied	5109	5110	5111	5112	Number of observations	Average weighted abundance
100.60	0	0	X	X	4	0.5
100.70	0	0	RR	X	4	0.5
100.80	-	-	X	-	1	1.0
100.90	0	-	-	-	1	0
103.30	0	-	-	X	2	0.5
103.35	0	-	R	-	2	0.5
103.40	-	-	RR	-	1	1.0
107.32	RR	X	VA	X	4	25.8
107.35	0	C	-	X	3	3.7
107.40	-	0	-	X	2	0.5
110.33	A	0	X	-	3	33.7
110.35	0	-	X	-	2	0.5
110.50	0	-	-	X	2	0.5
110.60	0	R	N	X	3	0.7
113.27	-	N	-	-	0	0
115.27	-	-	0	0	2	0
115.30	-	-	-	0	1	0
115.35	0	-	-	-	1	0
115.40	0	-	-	-	1	0
120.25	0	0	0	0	4	0
120.30	N	0	-	0	2	0
120.35	N	-	-	0	1	0
120.45	N	-	-	0	1	0
120.50	-	-	0	-	1	0
120.60	-	N	-	X	1	1.0
120.70	N	X	-	-	1	1.0
120.80	N	-	X	-	1	1.0
120.90	-	-	X	-	1	1.0
123.37	N	-	0	0	2	0
123.40	N	-	0	0	2	0
127.34	-	0	-	-	1	0
127.50	-	0	-	-	1	0
130.30	N	0	0	-	2	0
130.35	N	0	0	-	2	0
130.40	-	0	-	-	1	0
130.60	N	-	0	-	1	0
130.70	N	N	-	-	0	0
133.25	N	-	0	-	1	0
133.30	0	-	-	-	1	0
137.23	-	-	0	0	2	0
137.30	N	0	-	-	1	0
140.50	0	-	-	-	1	0
143.30	N	-	-	-	0	0
150.19	0	-	-	-	1	0
150.25	N	-	-	-	0	0
150.60	N	-	-	-	0	0
150.70	0	-	-	-	1	0
150.100	N	-	-	-	0	0
153.16	N	-	-	-	0	0
157.10	0	-	-	-	1	0

Visual Observations of Saury Abundance, 1952

Night stations occupied	5201	5202	5203	5204	5205	5206	5207	5208	5209	5210	5211	Number of observations	Average weighted abundance
43.50	-	-	-	-	-	-	C	-	-	-	-	1	10.0
50.47	-	-	-	-	-	0	-	-	-	-	-	1	0
50.50	-	-	-	-	-	0	-	-	-	-	-	1	0
50.55	-	-	-	-	-	-	N	-	-	-	-	0	0
50.60	-	-	-	-	-	-	N	-	-	-	-	0	0
53.60	-	-	-	-	-	-	VA	-	-	-	-	1	100.0
53.65	-	-	-	-	-	-	VA	-	-	-	-	1	100.0
57.55	-	-	-	-	-	N	-	-	-	-	-	0	0
57.65	-	-	-	-	-	0	-	-	-	-	-	1	0
60.55	-	-	-	-	-	0	-	-	X	-	N	2	0.5
60.60	-	-	-	N	-	0	X	-	-	-	C	3	3.7
60.65	-	-	-	-	-	0	-	-	-	-	-	1	0
60.70	-	-	-	N	-	-	0	-	-	C	-	2	5.0
60.80	-	-	-	-	0	-	-	-	N	0	R	3	0.3
60.90	-	-	-	-	-	-	-	-	X	-	R	2	1.0
60.100	-	-	-	-	-	0	0	-	-	-	-	2	0
63.52	-	-	-	-	0	-	-	0	-	-	VC	3	33.3
63.55	-	-	-	-	0	N	-	X	-	N	RR	3	0.7
63.60	-	-	-	-	N	N	-	-	-	-	-	0	0
63.65	-	-	-	-	0	0	N	-	-	-	-	2	0
67.50	-	-	-	N	0	-	-	-	X	-	-	2	0.5
67.55	-	-	-	0	-	-	-	-	X	N	-	2	0.5
67.65	-	-	-	-	-	N	X	R	-	N	R	3	1.0
70.51	-	-	-	-	-	-	-	R	-	-	C	2	5.5
70.60	-	-	-	-	-	0	X	X	-	N	C	4	3.0
70.65	-	-	-	-	-	0	0	-	-	-	-	2	0
70.70	-	-	-	-	X	0	VA	0	N	-	-	4	25.2
70.80	-	-	-	N	X	-	-	-	C	-	-	2	5.5
70.90	-	-	-	0	-	-	-	-	-	-	-	1	0
73.50	-	-	-	-	0	-	-	-	-	-	-	1	0
73.55	-	-	-	-	N	-	-	-	-	-	-	0	0
73.60	-	-	-	-	X	-	-	-	N	N	-	1	1.0

Visual Observations of Saury Abundance, 1952 (cont'd)

Night stations occupied	5201	5202	5203	5204	5205	5206	5207	5208	5209	5210	5211	Number of observations	Average weighted abundance
77.50	-	-	-	N	0	-	-	0	-	-	-	2	0
77.55	-	-	-	N	-	N	0	X	-	-	0	3	0.3
77.60	-	-	-	-	-	0	RR	-	-	-	-	2	0.5
77.65	-	-	-	-	-	0	X	-	N	N	-	2	0.5
80.51	0	X	-	0	0	-	-	-	-	-	-	4	0.2
80.55	0	-	-	0	-	-	-	-	X	-	-	3	0.3
80.60	-	-	0	-	-	-	-	-	X	0	RC	4	2.8
80.65	-	-	-	-	-	-	N	-	-	-	-	0	0
80.70	-	-	0	-	-	0	VC	R	-	0	0	6	16.8
80.80	VC	X	-	N	0	0	-	0	-	-	-	5	20.2
80.85	-	-	-	-	N	-	-	-	-	-	-	0	0
80.90	C	X	-	RR	-	-	-	-	0	-	-	4	3.0
80.100	-	-	0	-	-	-	-	0	X	-	0	4	0.2
80.110	RR	-	-	-	-	-	-	-	-	-	-	1	1.0
83.55	-	-	-	N	0	-	-	-	-	-	-	1	0
83.75	-	-	-	-	-	0	-	-	-	-	-	1	0
83.80	-	-	-	0	0	0	-	-	-	-	-	3	0
83.85	-	-	-	-	N	-	-	-	-	-	-	0	0
83.90	-	-	-	N	0	-	-	-	-	-	-	1	0
85.38	0	X	0	-	-	-	-	VC	-	-	RC	5	22.2
85.40	-	RR	X	-	-	-	0	-	-	VC	R	5	20.6
85.45	-	-	-	-	-	-	C	-	-	-	-	1	10.0
85.50	-	-	0	-	-	-	0	-	X	RR	0	5	0.4
85.55	-	-	-	-	-	-	N	-	-	-	-	0	0
85.60	RR	-	-	-	-	-	-	X	RC	0	-	4	3.0
85.70	VC	X	-	-	-	-	-	-	-	-	-	2	50.5
85.90	-	-	-	-	-	-	X	-	-	-	-	1	1.0
87.35	-	-	-	-	0	-	-	-	-	-	-	1	0
87.55	-	-	-	-	-	N	-	-	-	-	-	0	0
87.60	-	-	-	X	0	RC	-	-	-	-	-	3	3.7
87.65	-	-	-	-	N	-	-	-	-	-	-	0	0
87.70	-	-	-	0	0	-	-	-	-	-	-	2	0

Visual Observations of Saury Abundance, 1952 (cont'd)

Night stations occupied	5201	5202	5203	5204	5205	5206	5207	5208	5209	5210	5211	Number of observations	Average weighted abundance
90.28	-	0	-	X	-	-	0	-	0	-	-	4	0.2
90.30	-	VC	-	0	-	-	RR	-	0	-	R	5	20.4
90.37	VC	RR	-	C	-	-	0	-	N	-	X	5	22.4
90.45	VC	-	X	-	0	-	-	X	-	-	-	4	25.5
90.53	-	-	0	-	0	0	RR	X	-	-	-	5	0.4
90.60	-	RR	-	-	-	RR	0	-	0	VC	R	6	17.2
90.70	C	X	-	0	-	-	-	-	-	C	0	5	4.2
90.75	-	-	-	-	N	-	-	-	-	-	-	0	0
90.80	C	-	0	0	0	-	-	-	-	-	-	4	2.5
90.90	-	-	0	-	0	0	-	-	-	-	-	3	0
90.100	-	-	-	-	-	0	X	-	-	-	-	2	0.5
93.27	-	-	-	-	X	0	-	X	-	C	X	5	2.6
93.30	0	-	-	-	A	0	-	C	-	VC	X	6	35.2
93.35	-	-	-	-	N	N	-	-	-	-	-	0	0
93.40	VC	0	-	X	-	N	-	-	0	-	RC	5	22.2
93.50	-	RR	0	0	-	-	X	-	0	-	-	5	0.4
93.55	-	-	-	-	-	-	N	-	-	-	-	0	0
93.60	-	R	0	-	0	-	0	-	-	-	-	4	0.2
93.65	-	-	-	-	N	-	-	-	-	-	-	0	0
93.70	RR	-	-	-	0	0	-	-	-	-	-	3	0.3
93.80	-	-	-	0	-	N	-	-	-	-	-	1	0
93.90	-	-	-	0	-	-	-	-	-	-	-	1	0
97.30	-	-	0	-	-	-	N	-	N	-	-	1	0
97.32	RR	-	-	-	-	-	X	-	0	-	VA	4	25.5
97.35	-	-	-	-	N	-	-	-	-	-	-	0	0
97.40	C	-	-	0	X	-	RR	RC	N	0	RC	7	4.6
97.45	-	-	-	-	N	-	0	-	-	-	-	1	0
97.50	0	X	-	0	-	-	-	-	-	0	-	4	0.2
97.55	-	-	-	-	-	N	-	-	-	-	-	0	0
97.60	-	R	0	X	-	0	-	-	-	-	-	4	0.5
97.65	-	-	-	-	-	N	-	-	-	-	-	0	0
97.70	RC	-	0	-	-	-	-	-	-	-	-	2	5.0

Visual Observations of Saury Abundance, 1952 (cont'd)

Night stations occupied	5201	5202	5203	5204	5205	5206	5207	5208	5209	5210	5211	Number of observations	Average weighted abundance
97.75	-	-	-	-	N	-	-	-	-	-	-	0	0
97.80	-	-	-	-	C	-	0	-	-	-	-	2	5.0
97.90	-	-	-	0	-	-	0	-	-	-	-	2	0
100.29	0	-	0	-	N	N	-	0	0	C	VC	6	18.3
100.30	-	X	0	-	X	0	-	VA	RR	N	A	7	29.0
100.35	-	-	-	-	-	N	-	-	-	-	-	0	0
100.40	-	X	R	-	-	-	-	0	0	N	VC	5	20.4
100.45	-	-	-	-	-	-	N	-	-	-	-	0	0
100.50	-	-	-	X	-	-	N	-	-	-	-	1	1.0
100.55	-	-	-	-	-	-	N	-	-	-	-	0	0
100.60	-	-	-	0	RR	-	0	-	-	-	-	3	0.3
100.65	-	-	-	-	N	N	-	-	-	-	-	0	0
100.70	0	0	0	0	0	0	-	-	0	X	N	8	0.1
100.80	0	RC	X	-	-	N	-	X	X	N	X	6	2.3
100.90	-	R	-	-	N	-	X	-	-	-	-	2	1.0
100.100	-	-	-	0	-	-	0	-	-	-	-	2	0
103.30	-	-	-	0	N	-	-	0	-	-	N	2	0
103.35	-	-	-	0	-	-	-	0	X	-	-	3	0.3
103.40	-	-	-	X	-	-	-	0	0	0	-	4	0.2
103.55	-	-	-	-	-	N	-	-	-	-	-	0	0
103.60	-	-	-	-	N	-	-	-	-	-	-	0	0
103.70	-	-	-	0	-	-	-	-	-	-	-	1	0
103.80	-	-	-	N	-	0	-	-	-	-	-	1	0
103.90	-	-	-	-	0	0	-	-	-	-	-	2	0
105.32	0	RC	-	-	-	-	-	-	-	-	-	2	5.0
105.35	RC	-	-	-	-	-	-	-	-	-	-	1	10.0
105.50	-	RR	X	-	-	-	-	-	-	-	-	2	1.0
105.55	-	-	-	-	-	-	0	-	-	-	-	1	0
105.60	0	RC	0	-	-	-	0	-	-	-	-	4	2.5
105.70	0	RC	-	-	-	-	0	-	-	-	-	3	3.3
105.80	0	-	0	-	-	-	-	-	-	-	-	2	0
107.32	-	-	-	-	0	-	-	-	-	X	X	3	0.7

Visual Observations of Saury Abundance, 1952 (cont'd)

Night stations occupied	5201	5202	5203	5204	5205	5206	5207	5208	5209	5210	5211	Number of observations	Average weighted abundance
107.35	-	-	-	-	N	-	-	-	-	0	RR	2	0.5
107.40	-	-	-	-	-	-	-	-	-	0	X	2	0.5
107.45	-	-	-	-	-	0	-	-	-	-	-	1	0
107.50	-	-	-	-	-	0	-	-	-	-	-	1	0
107.55	-	-	-	-	-	0	-	-	-	-	-	1	0
107.60	-	-	-	N	RR	R	-	-	-	-	-	2	1.0
107.70	-	-	-	X	-	-	-	-	-	-	-	1	1.0
107.80	-	-	-	-	N	-	-	-	-	-	-	0	0
110.33	-	-	-	X	-	-	-	-	-	-	0	2	0.5
110.35	-	-	N	N	0	-	-	-	-	-	X	2	0.5
110.40	N	0	X	N	X	VC	-	-	-	0	X	6	17.2
110.45	-	-	-	-	N	C	-	-	-	-	-	1	10.0
110.50	RR	0	0	-	X	C	RR	0	-	0	N	8	1.6
110.60	RR	R	-	-	-	-	-	0	0	-	-	4	0.5
110.70	RR	-	-	0	-	-	-	-	-	-	-	2	0.5
110.80	0	-	-	N	0	RC	-	-	-	-	-	3	3.3
110.90	N	0	-	N	RC	C	R	-	-	-	-	4	5.2
113.30	-	-	-	-	-	-	N	0	X	-	-	2	0.5
113.35	-	N	-	RR	N	0	-	0	R	-	-	4	0.5
113.40	-	0	-	R	X	-	-	-	0	X	-	5	0.6
113.45	-	-	N	-	N	-	N	-	-	-	-	0	0
113.50	-	0	X-C	-	0	RR	0	-	-	-	-	6	2.0
113.55	-	-	RC	-	-	RR	N	-	-	-	-	2	5.5
113.60	-	-	0-RR	N	-	0	-	-	-	-	-	3	0.3
113.65	-	-	-	N	-	-	-	-	-	-	-	0	0
113.70	-	-	-	0	-	-	-	-	-	-	-	0	0
115.27	-	-	-	-	-	-	-	-	RR	-	-	1	1.0
115.30	-	-	-	-	-	-	-	-	N	-	-	0	0
115.50	X	-	-	-	-	RR	-	-	-	-	-	2	1.0
115.60	X	-	-	-	-	-	-	-	-	-	-	1	1.0
117.26	-	-	0-N	-	-	-	0	-	X	-	-	3	0.3
117.30	-	-	RR	0	-	-	0	-	N	-	X	4	0.5

Visual Observations of Saury Abundance, 1952 (cont'd)

Night stations occupied	5201	5202	5203	5204	5205	5206	5207	5208	5209	5210	5211	Number of observations	Average weighted abundance
117.35	-	N	X	N	-	0	N	-	-	-	N	2	0.5
117.40	-	0	-	0	-	-	-	-	-	0	X	4	0.2
117.45	-	-	-	N	X	-	-	-	-	-	-	1	1.0
117.50	-	0	X	-	X	-	-	-	-	-	-	3	0.7
117.55	-	-	N	-	N	-	N	-	-	-	-	0	0
117.60	-	-	X	-	-	RR	0	-	-	-	-	3	0.7
117.65	-	-	N	-	-	-	-	-	-	-	-	0	0
118.25	-	-	-	-	-	-	-	-	R	-	-	1	1.0
119.42	-	-	-	-	-	-	-	-	0	-	-	1	0
120.25	0	N	C	-	0	0	-	-	0-X	-	-	6	1.8
120.30	X	N	RR	-	RR	0	-	-	X-RR	0	X	8	0.8
120.35	0	-	X	N	RC	0	-	-	X-X	0	N	7	1.9
120.40	-	-	-	N	0	-	-	-	-	-	-	1	0
120.43	-	-	-	-	-	-	-	-	0	-	-	1	0
120.45	-	-	0	0-N	-	-	VC	X	N	-	X	5	20.4
120.50	-	N	0	RR	-	-	RR	0	0	0	0	7	0.3
120.55	-	-	-	-	-	0	0	-	-	-	-	2	0
120.60	N	N	X	-	-	0	-	-	0	0	-	4	0.2
120.65	-	-	N	-	-	N	-	-	-	-	-	0	0
120.70	X	-	C	-	0	-	-	-	-	-	-	3	3.7
120.80	X	-	-	0	RC	-	RR	-	-	-	-	4	3.0
120.90	-	0	0	0	RC	0	-	X	0	0	X	9	1.3
121.41	-	-	-	-	-	-	-	-	N	-	-	0	0
123.34	-	-	-	-	-	-	RR	-	-	-	-	1	1.0
123.37	0	-	0-RR	-	X	RR	N	-	0	-	0	7	0.4
123.40	-	N	VC	N	RR	X	RC	-	-	0	0	7	16.0
123.45	-	-	-	N	N	0	-	-	-	-	-	1	0
123.50	0	0	N	0	-	-	-	-	-	X	-	4	0.2
123.55	-	-	-	N	-	-	-	-	-	-	-	0	0
123.60	X	-	RC	0	-	-	N	-	-	-	-	3	3.7
127.34	0	-	RR	-	-	X	-	RC	0-X	-	-	6	2.2
127.40	-	-	X	RR	0	0	-	X	0	0	-	7	0.4

Visual Observations of Saury Abundance, 1952 (cont'd)

Night stations occupied	5201	5202	5203	5204	5205	5206	5207	5208	5209	5210	5211	Number of observations	Average weighted abundance
127.45	-	-	-	N	0	-	-	-	-	-	-	1	0
127.50	-	-	-	0	RR	-	0	-	-	0	-	4	0.2
127.55	-	-	-	-	N	-	-	-	-	-	-	0	0
127.60	C	0	0-RR	-	-	-	X	-	-	-	-	5	2.4
130.26	-	-	-	-	-	-	-	-	N	-	-	0	0
130.30	-	0	0	-	-	0	RC	-	-	0	-	5	2.0
130.35	-	-	0	-	-	-	-	0	0	0	-	4	0
130.40	X	-	-	0	-	-	-	0	0	0	-	5	0.2
130.45	-	-	-	N	N	-	-	-	-	-	-	0	0
130.50	RC	RC	N-VC	N	0	-	0	-	0	-	0	8	15.0
130.52	-	-	N	-	-	-	-	-	-	-	-	0	0
130.55	-	-	N	-	0	0	-	-	-	-	X	3	0.3
130.60	0	-	R-C	-	-	0	0	-	-	-	-	5	2.2
130.80	0	-	-	-	-	-	-	-	-	-	-	1	0
133.25	-	-	0-RC	-	-	-	VC	-	-	-	0	4	27.5
133.30	N	-	RC	0	VC	-	0	-	-	-	0	5	22.0
133.35	-	-	N	N	0	-	0	-	-	-	-	2	0
133.40	X	-	-	0	0	-	-	-	-	-	-	3	0.3
133.45	-	-	-	N	-	-	-	-	-	-	-	0	0
133.50	0	0	-	-	-	0	-	-	-	-	-	3	0
133.60	-	-	X	-	-	-	-	-	-	-	-	1	1.0
137.23	-	-	X	-	-	0	N	0	0	0	N	5	0.2
137.30	-	N	0	-	-	-	-	-	-	0	0	3	0
137.35	-	-	-	-	N	-	-	-	-	-	-	0	0
137.40	0	N	0	0	RC	-	-	-	-	-	-	4	2.5
137.45	-	-	-	N	N	-	-	-	-	-	-	0	0
137.50	VA	-	X	RR	0	0	0	-	-	-	-	6	17.0
137.60	N	-	0	0	-	-	-	-	-	-	-	2	0
140.30	-	-	-	-	-	-	-	-	0	-	-	1	0
140.35	-	0	-	-	-	-	-	-	-	-	-	1	0
140.40	-	N	-	-	-	-	-	-	-	-	-	0	0
140.50	-	N	-	-	-	-	-	-	-	-	-	0	0

Visual Observations of Saury Abundance, 1952 (cont'd)

Night stations occupied	5201	5202	5203	5204	5205	5206	5207	5208	5209	5210	5211	Number of observations	Average weighted abundance
143.26	-	0	-	-	-	-	-	-	N	-	-	1	0
143.30	-	N	-	-	-	-	-	-	-	-	-	0	0
147.20	-	N	-	-	-	-	-	-	-	-	-	0	0
150.30	-	0	-	-	-	-	-	-	-	-	-	1	0
150.40	-	0	-	-	-	-	-	-	-	-	-	1	0
153.16	-	-	-	-	-	-	-	-	N	-	-	0	0

Visual Observations of Saury Abundance, 1953

Night stations occupied	5301	5302	5303	5304	5305	5306	5307	5308	5309	5310	5311	5312	Number of observations	Average weighted abundance
60.60	-	-	-	0	-	-	-	-	-	-	-	-	1	0
60.70	-	-	-	X	-	-	VA	-	-	-	-	-	2	50.5
60.80	-	-	-	X	X	-	-	0	-	-	-	-	3	0.7
60.90	-	-	-	-	R	-	-	N	-	-	-	-	1	1.0
60.100	-	-	-	-	N	-	-	-	-	-	-	-	0	0
63.52	-	-	-	-	0	-	-	-	-	-	-	-	1	0
63.55	-	-	-	-	0	-	-	-	-	-	-	-	1	0
63.65	-	-	-	-	0	-	-	-	-	-	-	-	1	0
67.50	-	-	-	0	-	-	-	-	-	-	-	-	1	0
67.53	-	-	-	-	-	-	N	-	-	-	-	-	0	0
67.55	-	-	-	0	-	0	RR	-	-	-	-	-	3	0.3
67.60	-	-	-	-	-	N	N	-	-	-	-	-	0	0
67.65	-	-	-	-	-	VC	N	N	-	-	-	-	1	100.0
70.51	-	-	-	0	-	-	N	0	-	-	-	-	2	0
70.65	-	-	-	-	-	N	-	-	-	-	-	-	0	0
70.70	-	-	-	-	C	X	-	-	-	-	-	-	2	5.5
70.80	-	-	-	-	0	N	N	0	-	-	-	-	2	0
70.90	-	-	-	X	-	-	-	-	-	-	-	-	1	1.0
70.120	-	-	-	-	C	-	-	-	-	-	-	-	1	10.0
73.50	-	-	-	0	-	0	0	N	-	-	-	-	3	0
73.55	-	-	-	-	-	X	-	-	-	-	-	-	1	1.0
73.60	-	-	-	0	X	RC	-	0	-	-	-	-	4	2.8
77.50	-	-	-	-	-	-	N	N	-	-	-	-	0	0
77.55	-	-	-	-	-	-	N	-	-	-	-	-	0	0
80.51	-	-	-	0	-	0	-	0	-	-	-	-	3	0
80.55	X	-	-	RR	-	0	-	0	-	-	-	-	4	0.5
80.60	RR	N	N	0	-	X	VC	0	-	-	-	-	5	20.4
80.65	-	-	-	-	-	N	-	-	-	-	-	-	0	0
80.70	RC	X	N	-	-	-	N	-	-	-	-	-	2	5.5
80.80	-	-	-	-	0	-	-	-	-	-	-	-	1	0
80.90	-	-	-	0	0	-	-	N	-	-	-	-	2	0
80.100	X	-	X	0	-	VC	N	R	-	-	-	-	5	20.6

Visual Observations of Saury Abundance, 1953 (cont'd)

Night stations occupied	5301	5302	5303	5304	5305	5306	5307	5308	5309	5310	5311	5312	Number of observations	Average weighted abundance
80.120	-	-	-	-	X	-	-	-	-	-	-	-	1	1.0
80.130	-	-	-	N	0	-	-	-	-	-	-	-	1	0
80.145	-	-	-	0	-	-	-	-	-	-	-	-	1	0
80.152	-	-	-	N	-	-	-	-	-	-	-	-	0	0
80.160	-	-	-	-	N	-	-	-	-	-	-	-	0	0
81.46	-	-	-	-	-	-	-	-	-	0	-	-	1	0
82.47	-	-	-	-	-	-	-	-	-	X-N	-	-	1	1.0
83.40	R	N	-	-	N	0-0	-	-	0	-	-	0	5	0.2
83.41	-	-	-	-	-	-	-	-	-	0	-	-	1	0
83.43	0	N	-	-	-	0	-	-	0	-	-	-	3	0
83.48	0	-	-	-	N	-	0	N	-	N	RR	0	4	0.2
83.51	-	-	-	-	0	-	RC	0	-	-	RC	0	5	4.0
83.55	-	-	-	X	-	-	VC	N	X	-	VC	0	5	40.4
83.60	-	X	0	RR	-	0	C	-	-	-	VC	RC	7	17.4
83.65	-	-	-	-	-	0	-	-	-	-	-	-	0	0
83.70	-	-	-	-	X	X	-	-	-	-	-	-	2	1.0
83.80	-	-	-	-	N	-	-	-	-	-	-	-	0	0
83.90	-	-	-	X	0	-	-	-	-	-	-	-	2	0.5
85.39	-	N	-	-	N	0-X	C	-	-	-	X	C	5	4.4
85.40	-	N	-	0-0	0-0	0-0	RC	C	-	-	R	C	10	3.1
85.45	A	-	-	0-RC	X-0-0	0	0	-	N	-	R	RR	10	11.3
85.50	X	N	N	0	0-N	-	-	-	N	-	-	0	4	0.2
85.55	X	X	0	X	0-N	-	-	-	0-VA	-	-	-	7	14.7
85.60	-	X	X	-	N	-	-	-	0	-	-	-	3	0.7
87.35	-	N	0	0	0	-	-	-	-	-	RR	C	5	2.2
87.40	X	N	X	-	0	-	C	-	VA	-	-	N	5	22.4
87.45	X	RR	X	-	-	-	-	C	-	-	-	N	4	3.2
87.50	0	N	-	-	0	-	-	0	-	-	-	-	3	0
87.55	-	-	-	-	0-N	-	-	N	-	-	RR	-	2	0.5
87.60	-	-	-	N	0-0-N	RR	RR	-	-	-	RC	-	5	2.4
87.65	-	-	-	-	-	N	-	-	-	-	-	-	0	0
87.70	-	-	-	X	-	-	-	-	-	-	-	-	1	1.0

Visual Observations of Saury Abundance, 1953 (cont'd)

Night stations occupied	5301	5302	5303	5304	5305	5306	5307	5308	5309	5310	5311	5312	Number of observations	Average weighted abundance
87.90	-	-	-	-	-	0	-	-	-	-	-	-	1	0
90.27	-	-	-	-	0	-	-	-	-	-	-	-	1	0
90.28	0	-	-	0	0	-	C	A	-	0	-	-	6	18.3
90.30	0	-	N	0	VC	VC	N	-	-	0	-	-	5	40.0
90.35	-	-	-	-	N	-	-	-	-	-	-	-	0	0
90.37	R	N	N	0	X	VA	-	-	-	0	-	-	5	20.4
90.41	-	-	-	-	N	-	-	-	-	-	-	-	0	0
90.45	-	N	VA	-	-	-	-	-	-	0	-	0	3	33.3
90.50	-	-	0	-	-	-	-	-	-	-	-	-	1	0
90.53	-	X	-	-	-	-	-	-	-	-	-	-	1	1.0
90.55	-	-	-	-	-	-	-	X	-	-	-	-	1	1.0
90.58	-	-	-	-	-	-	-	N	-	-	-	-	0	0
90.60	-	-	-	RR	-	-	-	N	-	-	-	0	2	0.5
90.65	-	-	-	-	-	N	-	-	-	-	-	-	0	0
90.70	RR	-	C	0	0	0	VA	-	-	0	-	-	7	15.9
90.80	-	N	N	-	R	-	-	-	-	-	-	-	1	1.0
90.100	-	-	-	-	-	0	-	-	-	-	-	-	1	0
90.110	-	-	-	X	-	-	-	-	-	-	-	-	1	1.0
90.120	-	-	-	0	0	-	-	-	-	-	-	-	2	0
90.130	-	-	-	-	0	-	-	-	-	-	-	-	1	0
90.160	-	-	-	0	-	-	-	-	-	-	-	-	1	0
93.27	-	-	-	-	-	0	0	N	-	0	-	-	3	0
93.30	-	N	X	-	X	X	0	VC	-	0	-	-	6	17.2
93.35	-	-	-	N	N	N	N	-	-	-	-	-	0	0
93.40	-	0	X	X	R	-	N	-	-	-	-	N	4	0.8
93.45	-	-	-	N	-	-	-	-	-	-	-	-	0	0
93.50	0	-	-	-	-	-	-	-	-	-	-	VC	2	50.0
93.60	X	-	-	-	-	0	-	-	-	-	-	-	2	0.5
93.65	-	-	-	-	-	N	-	-	-	-	-	-	0	0
93.70	-	-	-	RR	-	-	-	-	-	-	-	-	1	1.0
93.90	-	-	-	-	-	0	-	-	-	-	-	-	1	0
97.30	0	-	0	0	0	RR	R	X	-	-	-	0	8	0.4

Visual Observations of Saury Abundance, 1953 (cont'd)

Night stations occupied	5301	5302	5303	5304	5305	5306	5307	5308	5309	5310	5311	5312	Number of observations	Average weighted abundance
97.32	R	N	-	-	-	-	-	-	-	-	-	-	1	1.0
97.35	-	-	0	-	N	C	RR	X	-	-	-	RC	6	3.7
97.38	-	-	-	-	-	-	-	N	-	-	-	-	0	0
97.40	R	0	0	-	-	-	N	X	-	R	-	C	6	2.2
97.50	-	RR	-	-	-	-	-	-	-	0	-	-	2	0.5
97.60	-	-	-	RC	N	N	-	-	-	-	-	-	1	10.0
97.65	-	-	-	-	-	N	-	-	-	-	-	-	0	0
97.70	-	-	-	X	-	-	-	-	-	-	-	-	1	1.0
97.80	-	-	-	-	-	X	-	-	-	-	-	-	1	1.0
97.90	-	-	-	-	-	N	-	-	-	-	-	-	0	0
100.29	N	0	0	0	0	-	-	-	-	-	-	0	5	0
100.30	-	N	0	X	-	-	-	N	-	-	-	R	3	0.7
100.35	-	-	-	N	-	-	-	N	-	-	-	-	0	0
100.40	-	N	0	-	-	-	-	VC	-	-	-	VC	3	66.7
100.50	0	-	-	-	-	RR	VC	-	-	0	-	-	4	25.2
100.55	-	-	-	-	N	N	-	-	-	-	-	-	0	0
100.60	X	-	-	R	X	N	0	-	-	0	-	-	5	0.6
100.70	-	0	0	X	-	-	-	-	-	-	-	0	4	0.2
100.80	-	0	RR	-	-	-	-	0	-	-	-	N	3	0.3
100.90	0	-	-	-	N	N	-	-	-	-	-	-	1	0
103.30	-	-	-	0	-	-	-	N	-	R	-	-	2	0.5
103.35	-	-	-	X	-	RR	-	VC	-	0	-	-	4	25.5
103.40	-	-	-	0	N	R	-	C	-	0	-	-	4	2.8
103.45	-	-	-	-	N	N	-	-	-	-	-	-	0	0
103.50	-	-	-	-	0	-	-	-	-	-	-	-	1	0
103.55	-	-	-	-	N	-	-	-	-	-	-	-	0	0
103.80	-	-	-	X	-	VC	-	-	-	-	-	-	2	50.5
103.90	-	-	-	0	0	-	-	-	-	-	-	-	2	0
105.32	-	-	0	-	-	-	-	-	-	-	-	-	1	0
105.35	-	-	0	-	-	-	-	-	-	-	-	-	1	0
105.40	X	N	N	-	-	-	-	-	-	-	-	-	1	1.0
105.50	0	RC	-	-	-	-	-	-	-	-	-	-	2	5.0

Visual Observations of Saury Abundance, 1953 (cont'd)

Night stations occupied	5301	5302	5303	5304	5305	5306	5307	5308	5309	5310	5311	5312	Number of observations	Average weighted abundance
105.60	0	-	-	-	-	-	-	-	-	-	-	-	1	0
105.80	0	-	-	-	-	-	-	-	-	-	-	-	1	0
107.32	-	-	-	-	-	-	C	-	-	0	-	R	3	3.7
107.35	-	-	-	-	-	-	N	-	-	0	-	0	2	0
107.40	-	-	-	-	RR	-	0	-	-	VC	-	RC	4	27.8
107.45	-	-	-	-	N	-	-	-	-	-	-	-	0	0
107.50	-	-	-	-	0	X	-	-	-	-	-	-	2	0.5
107.55	-	-	-	N	-	N	-	-	-	-	-	-	0	0
107.60	-	-	-	X	-	0	-	-	-	-	-	-	2	0.5
107.70	-	-	-	0	-	-	-	-	-	-	-	-	1	0
107.80	-	-	-	N	0	-	-	-	-	-	-	-	1	0
107.90	-	-	-	-	RR	-	-	-	-	-	-	-	1	1.0
110.30	-	-	-	-	-	-	-	VA	-	-	-	-	1	100.0
110.33	-	-	-	N	0	-	0	N	-	-	-	N	2	0
110.35	-	-	-	N	N	-	-	N	-	-	-	-	0	0
110.40	-	-	-	0	-	-	-	C	-	-	-	-	2	5.0
110.45	-	-	-	-	N	-	-	-	-	-	-	-	0	0
110.50	R	C	-	-	-	0	-	-	-	0	-	0	5	2.2
110.55	-	-	-	-	-	N	-	-	-	-	-	-	0	0
110.60	R	C	RR	-	0	RR	-	-	-	0	-	VC	7	16.1
110.65	-	-	-	-	-	0	-	-	-	-	-	-	1	0
110.70	-	-	RR	N	N	-	-	-	-	-	-	-	1	1.0
110.80	-	-	-	0	-	-	-	-	-	-	-	-	1	0
113.30	-	N	0	-	-	0	0	-	-	-	-	-	3	0
113.35	-	N	N	0	-	0	RR	0	-	0	-	-	5	0.2
113.40	-	N	X	RR	0	-	-	X	-	X	-	-	5	0.8
113.45	-	-	N	N	N	-	-	-	-	-	-	-	0	0
113.50	-	-	RC	0	0	-	-	-	-	-	-	-	3	3.3
113.60	-	-	0	-	-	-	-	-	-	-	-	-	1	0
113.65	-	-	-	-	-	0	-	-	-	-	-	-	1	0
113.70	-	-	-	-	-	X	-	-	-	-	-	-	1	1.0
115.26	-	-	-	-	-	-	-	-	N	-	-	-	0	0

Visual Observations of Saury Abundance, 1953 (cont'd)

Night stations occupied	5301	5302	5303	5304	5305	5306	5307	5308	5309	5310	5311	5312	Number of observations	Average weighted abundance
115.30	-	-	-	-	-	-	-	-	N	-	-	-	0	0
115.35	-	-	-	-	-	-	-	-	N	-	-	-	0	0
117.26	-	0	0-N	-	0	X	0	-	0	-	-	-	7	0.1
117.30	0	N	-	-	0	X	RR	-	X	-	-	-	5	0.6
117.35	0	-	-	-	0	X	-	-	X	-	-	-	4	0.5
117.40	0	-	-	-	-	0	-	-	-	0	-	-	3	0
117.45	-	-	N	-	-	-	-	-	-	-	-	-	0	0
117.50	-	R	X	X	-	-	-	-	-	-	-	-	3	1.0
117.55	-	-	N-N	N	-	-	-	-	-	-	-	-	0	0
117.60	-	-	RC	0	0	-	-	-	-	-	-	-	3	3.3
117.70	-	-	0	0	N	N	-	-	-	-	-	-	2	0
118.33	-	-	-	-	-	-	-	-	-	-	-	N	0	0
119.42	-	-	-	-	-	-	-	-	0	-	-	-	1	0
120.25	-	-	0-X	0	-	-	-	-	0	0	-	N	5	0.2
120.30	-	VC	0	0	-	-	-	0	N	C	-	N	5	22.0
120.35	X	RR	-	X	-	-	0	0	-	VC	-	X	7	14.9
120.40	-	-	N	N	-	-	-	-	-	-	-	-	0	0
120.43	-	-	-	-	-	-	-	-	N	-	-	-	0	0
120.45	0	A	R	-	0	-	R	-	-	-	-	N	5	20.4
120.50	VA	0	0	-	VC	-	-	X	-	-	-	-	5	40.2
120.55	-	-	N	-	-	N	-	-	-	-	-	-	0	0
120.60	-	-	RR	-	-	RR	-	N	-	0	-	X	4	0.8
120.65	-	-	-	-	-	0	-	-	-	-	-	-	1	0
120.70	-	N	-	0	-	X	0	-	-	0	-	RR	5	0.2
120.80	R	N	-	0	0	-	VA	-	-	-	-	-	4	25.2
120.90	-	-	-	-	N	-	-	-	-	-	-	0	1	0
121.27	-	-	-	-	-	-	-	-	-	-	-	0	1	0
121.30	-	-	-	-	-	-	-	-	N	-	-	-	0	0
121.34	-	-	-	-	-	-	-	-	N	-	-	-	0	0
121.41	-	-	-	-	-	-	-	-	N	-	-	-	0	0
123.37	-	0	0	-	-	-	-	X	-	-	-	0	4	0.2
123.40	-	N	-	0	-	-	-	C	-	0	-	0	4	2.5

Visual Observations of Saury Abundance, 1953 (cont'd)

Night stations occupied	5301	5302	5303	5304	5305	5306	5307	5308	5309	5310	5311	5312	Number of observations	Average weighted abundance
123.45	-	-	-	N	-	-	N	N	-	-	-	0	1	0
123.50	-	-	-	0	-	-	0	-	-	N	-	-	2	0
123.55	-	-	-	N	N	-	-	-	-	-	-	-	0	0
123.60	-	-	0-RR	0	RR	-	-	-	-	-	-	-	4	0.5
127.34	N	0	0-RC	-	0	0	-	RC	-	-	-	-	6	3.3
127.40	-	N	0	-	0	X	-	0	-	-	-	N	4	0.2
127.45	-	N	-	-	-	-	N	-	-	-	-	-	0	0
127.50	-	0	-	0	-	-	0	-	-	-	-	0	4	0
127.55	-	-	N	N	-	-	-	-	-	-	-	-	0	0
127.60	-	-	R	0	-	-	-	-	-	-	-	-	2	0.5
130.30	-	RR	N-R	X	-	-	RR	R	-	N	-	-	5	1.0
130.35	0	RC	-	X	-	-	VC	-	-	N	-	N	4	27.8
130.40	0	R	-	N	-	-	RC	-	-	0	-	0	5	2.2
130.45	-	N	-	-	-	N	-	-	-	-	-	-	0	0
130.50	0	-	0	-	N	C	-	-	-	-	-	-	3	3.3
130.55	-	-	NN	-	N	N	-	-	-	-	-	-	0	0
130.60	-	-	X-N	-	N	-	-	0	-	-	-	-	2	0.5
133.25	0	-	0-X	0	0	-	-	-	-	-	-	-	5	0.2
133.30	0	-	0	-	-	N	-	-	-	RR	-	-	3	0.3
133.35	-	-	N	-	-	0	-	-	-	-	-	-	1	0
133.40	0	-	-	-	-	X	-	-	-	0	-	0	4	0.2
133.45	-	-	-	-	N	0	-	-	-	-	-	-	1	0
133.50	-	-	-	0	N	-	-	-	-	-	-	-	1	0
133.55	-	-	-	N	N	-	-	-	-	-	-	-	0	0
133.60	-	-	0	-	-	-	-	-	-	-	-	-	1	0
137.23	-	0	N-0	0	0	0	X	0	-	-	-	-	7	0.1
137.30	-	N	0	-	-	0	RC	0	-	-	-	N	4	2.5
137.35	-	-	-	-	-	N	-	-	-	-	-	-	0	0
137.50	0	-	0	-	RR	-	-	-	-	-	-	-	3	0.3
137.55	-	-	N	-	N	-	-	-	-	-	-	-	0	0
137.60	-	-	0	0	-	-	-	-	-	-	-	-	2	0
140.50	0	-	-	-	-	-	-	-	-	-	-	-	1	0

Visual Observations of Saury Abundance, 1953 (cont'd)

Night stations occupied	5301	5302	5303	5304	5305	5306	5307	5308	5309	5310	5311	5312	Number of observations	Average weighted abundance
143.26	N	-	-	-	-	-	-	-	-	-	-	-	0	0
143.30	N	-	-	-	-	-	-	-	-	-	-	-	0	0
143.35	0	-	-	-	-	-	-	-	-	-	-	-	1	0
147.30	0	-	-	-	-	-	-	-	-	-	-	-	1	0
150.25	0	-	-	-	-	-	-	-	-	-	-	-	1	0
150.30	0	-	-	-	-	-	-	-	-	-	-	-	1	0
150.40	0	-	-	-	-	-	-	-	-	-	-	-	1	0

Visual Observations of Saury Abundance, 1954

Night stations occupied	5401	5402	5403	5404	5405	5406	5407	5408	5410	5412	Number of observations	Average weighted abundance
50.70	-	-	-	-	-	N	-	-	-	-	0	0
50.80	-	-	-	-	-	X	-	-	-	-	1	1.0
53.52	-	-	-	-	-	N	-	-	-	-	0	0
53.55	-	-	-	-	-	0	-	-	-	-	1	0
53.65	-	-	-	-	-	0	-	-	-	-	1	0
60.55	-	-	-	-	-	-	N	-	-	-	0	0
60.60	-	-	-	-	-	-	R	-	-	-	1	1.0
60.70	-	-	-	-	0	-	N	N	-	-	1	0
60.80	-	-	-	0	R	-	-	0	-	-	3	0.3
60.90	-	-	-	0	-	R	-	-	-	-	2	0.5
60.100	-	-	-	-	-	VC	-	-	-	-	1	100.0
67.50	-	-	-	0	0	-	0	R	-	-	4	0.2
67.55	-	-	-	-	0	X	N	N	-	-	2	0.5
67.65	-	-	-	-	-	X	-	-	-	-	1	1.0
70.51	-	-	-	-	0	-	-	-	-	-	1	0
70.52	-	-	-	-	-	-	N	-	-	-	0	0
70.55	-	-	-	-	0	-	N	-	-	-	1	0
70.60	-	-	-	-	-	N	N	-	-	-	0	0
70.70	-	-	-	0	-	0	-	N	-	-	2	0
70.80	-	-	-	-	0	0	-	0	-	-	3	0
70.90	-	-	-	0	0	-	-	-	-	-	2	0
73.50	-	-	-	0	-	-	-	N	-	-	1	0
73.55	-	-	-	-	-	-	-	N	-	-	0	0
73.60	-	-	-	-	-	-	-	N	-	-	0	0
77.50	0	N	-	0	0	-	N	N	N	-	3	0
77.55	0	-	-	-	0	N	N	-	-	-	2	0
80.51	0	0	-	0	N	0	-	RC	-	-	5	2.0
80.55	-	X	RR	N	-	N	-	0	-	-	3	0.7
80.60	-	0	RR	-	-	0	-	N	N	X	4	0.5
80.70	-	-	RR	-	-	-	-	-	N	X	2	1.0
80.80	C	-	-	-	0	-	N	-	-	X	3	3.7
80.90	0	-	-	-	0	-	N	-	-	-	2	0

Visual Observations of Saury Abundance, 1954 (cont'd)

Night stations occupied	5401	5402	5403	5404	5405	5406	5407	5408	5410	5412	Number of observations	Average weighted abundance
80.100	-	-	-	-	-	0	-	N	-	-	1	0
82.47	0	-	-	0	-	-	-	-	0	-	3	0
83.40	-	-	-	0	-	-	-	-	N	-	1	0
83.43	0	-	-	X	-	-	-	-	N	-	2	0.5
83.48	0	0	-	0	-	-	N	-	-	-	3	0
83.51	0	X	X	-	0	-	0	-	-	X	6	0.5
83.55	0	VA	X	-	0	-	N	-	-	X	5	20.4
83.60	-	VA	RC	-	0	-	-	0	N	C	5	24.0
83.80	-	-	-	X	-	0	-	-	-	-	2	0.5
83.90	-	-	-	0	-	0	-	-	-	-	2	0
85.39	-	X	RC	0	-	-	-	-	0	0	5	2.2
85.40	-	X	0	0	-	-	-	-	N	0	4	0.2
85.45	-	0	R	R	0	-	-	-	N	C	5	2.4
85.50	-	-	R	0	0	0	0	N	N	C	6	1.8
85.55	0	N	N	-	C	0	N	N	N	-	3	3.3
85.60	X	0	-	-	-	0	N	0	N	-	4	0.2
87.35	0	0	RC	-	-	-	RR	-	-	X	5	2.4
87.40	0	0	R	-	RC	-	-	-	-	0	5	2.2
87.45	0	-	0	-	0	-	-	R	-	0	5	0.2
87.50	-	-	-	-	0	0	-	N	-	A	3	33.3
87.55	X	A	-	-	-	0	-	RR	-	-	4	25.5
87.60	X	RC	-	0	-	0	-	0	-	-	5	2.2
87.70	-	-	-	0	-	-	-	-	-	-	1	0
87.80	-	-	-	RC	X	-	-	-	-	-	2	5.5
87.90	-	-	-	-	0	-	-	-	-	-	1	0
90.28	X	RR	0	0	0	N	N	-	-	-	5	0.4
90.30	RR	X	-	N	N	0	0	-	-	-	4	0.5
90.32	-	-	-	-	-	0	-	-	-	-	1	0
90.37	0	-	-	-	-	0	-	0	-	N	3	0
90.45	-	-	-	-	-	-	-	N	N	-	0	0
90.50	-	-	-	-	0	-	-	-	N	-	1	0
90.55	-	RR	N	-	0	-	-	0	N	-	3	0.3

Visual Observations of Saury Abundance, 1954 (cont'd)

Night stations occupied	5401	5402	5403	5404	5405	5406	5407	5408	5410	5412	Number of observations	Average weighted abundance
90.60	-	0	0	RR	0	-	0	-	N	0	6	0.2
90.70	RR	-	0	RR	-	N	N	-	-	0	4	0.5
90.80	X	-	-	-	-	N	-	-	-	-	1	1.0
90.90	-	-	-	-	N	-	-	-	-	-	0	0
90.110	N	-	-	-	-	-	-	-	-	-	0	0
92.85	-	-	0	-	-	-	-	-	-	-	1	0
93.27	RR	-	-	N	-	-	0	-	-	0	3	0.3
93.30	-	-	-	0	-	-	VC	-	-	N	2	50.0
93.35	-	-	-	N	-	-	RR	-	-	-	1	1.0
93.40	-	-	0	-	-	-	-	R	N	-	2	0.5
93.45	-	-	-	-	-	-	-	N	N	-	0	0
93.50	N	RC	-	-	C	-	-	0	VC	-	4	30.0
93.55	-	-	-	-	0	0	-	-	N	-	2	0
93.60	0	0	-	N	0	0	-	-	-	-	4	0
93.70	-	-	-	N	-	N	-	-	-	-	0	0
93.87	-	-	0	-	-	-	-	-	-	-	1	0
94.80	-	-	0-X	-	-	-	-	-	-	-	2	0.5
97.30	0	0	N	-	-	-	-	-	-	0	3	0
97.32	0	0	-	-	-	-	-	-	-	-	2	0
97.36	-	-	-	-	N	-	-	-	-	-	0	0
97.40	-	X	-	X	0	-	-	-	N	-	3	0.7
97.45	-	-	-	N	X	-	-	-	X	-	2	1.0
97.50	-	-	-	N	N	-	-	N	N	-	0	0
97.55	-	-	0	-	-	N	-	-	N	-	1	0
97.60	0	-	N	-	-	0	-	-	-	-	2	0
97.70	-	-	N	-	-	N	-	-	-	-	0	0
97.80	-	-	0	X	0	-	-	-	-	-	3	0.3
97.90	-	-	-	N	RR	-	-	-	-	-	1	1.0
100.29	0	N	N	-	0	0	-	-	N	0	4	0
100.30	0	0	-	N	N	N	-	-	N	0	3	0
100.35	-	-	-	N	N	N	X	-	-	-	1	1.0
100.40	0	-	-	N	N	N	0	-	N	-	2	0

Visual Observations of Saury Abundance, 1954 (cont'd)

Night stations occupied	5401	5402	5403	5404	5405	5406	5407	5408	5410	5412	Number of observations	Average weighted abundance
100.45	-	-	-	N	-	N	O	RC	-	-	2	5.0
100.50	-	-	-	-	-	-	O	R	-	-	2	0.5
100.55	-	-	N	-	-	-	-	-	-	-	0	0
100.60	-	-	N	-	-	-	-	RR	-	O	2	0.5
100.70	O	X	O	N	N	-	-	-	N	O	4	0.2
100.80	X	O	-	X	N	N	-	-	N	-	3	0.7
100.90	-	-	-	-	RR	O	-	-	N	-	2	0.5
103.30	O	O	O	-	-	-	-	C	-	-	4	2.5
103.35	O	-	N	-	-	-	-	RC	-	N	2	5.0
103.40	N	-	RR	-	-	O	-	RR	-	O	4	0.5
103.45	-	-	-	N	-	-	-	-	-	-	0	0
103.50	-	-	-	N	-	N	-	-	-	-	0	0
103.55	-	-	-	N	-	N	-	-	-	-	0	0
103.60	-	O	-	-	X	N	-	-	-	-	2	0.5
103.70	-	-	-	-	N	-	-	-	-	-	0	0
103.80	-	-	-	X	-	-	-	-	-	-	1	1.0
103.90	-	-	-	-	N	-	-	-	-	-	0	0
107.32	-	N	-	N	O	-	-	-	O	-	2	0
107.35	-	N	-	N	O	-	RC	-	RR	-	3	3.7
107.40	O	-	N	N	O	-	X	-	RR	C	5	2.4
107.45	-	-	N	N	-	-	-	-	-	-	0	0
107.50	O	-	R	-	-	O	-	-	-	-	3	0.3
107.55	-	-	N	-	-	N	-	-	-	-	0	0
107.60	O	-	-	-	-	N	-	-	-	-	1	0
107.70	-	-	-	N	-	-	-	-	-	-	0	0
107.80	-	-	-	-	N	-	-	-	-	-	0	0
110.33	-	N	-	N	-	-	O	-	O	N	2	0
110.35	O	O	-	-	-	-	RR	-	RR	O	5	0.4
110.40	O	N	O	-	-	O	-	-	O	-	4	0
110.45	-	-	N	-	N	N	-	-	O	-	1	0
110.50	O	-	N	-	N	N	-	X	-	-	2	0.5
110.55	-	-	N	-	N	N	-	-	-	-	0	0

Visual Observations of Saury Abundance, 1954 (cont'd)

Night stations occupied	5401	5402	5403	5404	5405	5406	5407	5408	5410	5412	Number of observations	Average weighted abundance
110.60	-	-	-	N	N	0	-	X	-	0	3	0.3
110.70	-	-	-	N	-	-	-	-	-	-	0	0
110.80	0	-	-	N	-	-	-	-	-	-	1	0
110.90	0	-	-	-	N	-	-	-	-	-	1	0
110.100	0	-	-	-	-	-	-	-	-	-	1	0
113.30	N	N	N	-	-	N	N	0	0	-	2	0
113.32	-	-	N	-	-	N	-	-	-	-	0	0
113.35	N	-	0	-	-	-	-	X	-	-	2	0.5
113.40	N	-	-	-	N	-	-	R	-	-	1	1.0
113.42	-	-	-	-	N	-	-	-	-	-	0	0
113.45	-	-	-	-	N	-	-	-	-	-	0	0
113.47	-	-	-	N	N	-	-	-	-	-	0	0
113.50	N	N	-	N	N	-	-	-	-	N	0	0
113.55	-	-	N	N	N	N	-	-	-	-	0	0
113.60	-	0	N	N	-	N	-	-	-	N	1	0
113.70	-	-	-	-	-	0	-	-	-	-	1	0
117.26	N	-	N	N	N	N	0	-	0	-	2	0
117.28	-	-	-	N	RR	N	-	-	-	-	1	1.0
117.30	N	-	-	-	N	0	N	-	0	N	2	0
117.35	-	0	-	-	-	-	-	-	0	N	2	0
117.40	-	X	-	-	-	0	-	-	-	N	2	0.5
117.42	-	-	-	-	-	N	-	-	-	-	0	0
117.45	-	N	N	-	N	N	-	-	-	-	0	0
117.47	-	-	N	N	N	N	-	-	-	-	0	0
117.50	-	0	N	0	N	N	-	-	N	-	2	0
117.55	-	0	N	0	N	-	-	-	-	-	2	0
117.60	-	-	0	N	RC	-	-	-	-	-	2	5.0
120.25	N	0	-	0	N	-	0	0	C	-	5	2.0
120.27	-	-	-	0	X	-	-	-	-	-	2	0.5
120.30	N	0	N	0	N	-	0	0	RR	-	5	0.2
120.32	-	-	N	-	-	-	-	-	-	-	0	0
120.35	N	X	N	-	-	-	-	0	-	N	2	0.5

Visual Observations of Saury Abundance, 1954 (cont'd)

Night stations occupied	5401	5402	5403	5404	5405	5406	5407	5408	5410	5412	Number of observations	Average weighted abundance
120.37	-	0	N	-	-	-	-	-	-	-	1	0
120.40	-	0	N	-	-	-	-	-	-	N	1	0
120.42	-	0	N	-	-	N	-	-	-	-	1	0
120.45	-	-	N	-	-	N	-	-	0	N	1	0
120.47	-	-	-	N	-	N	-	-	-	-	0	0
120.50	-	-	A	X	-	0	N	-	0	N	4	25.2
120.55	-	-	-	N	N	N	-	-	-	-	0	0
120.60	-	-	-	N	N	-	VC	-	-	-	1	100.0
120.70	N	C	0	-	0	-	-	0	-	N	4	2.5
120.80	N	N	N	-	-	-	-	RR	-	N	1	1.0
120.90	-	-	RR	-	-	N	-	-	0	-	2	0.5
120.120	-	-	-	RC	-	-	-	-	-	-	1	10.0
123.37	N	0	-	-	N	N	0	-	X	N	3	0.3
123.40	N	0	N	N	N	N	0	-	0	N	3	0
123.42	-	0	N	N	-	N	-	-	-	-	1	0
123.45	-	0	N	N	-	N	0	0	0	-	4	0
123.47	-	-	N	-	-	-	-	-	-	-	0	0
123.48	-	-	-	C	-	-	-	-	-	-	1	10.0
123.50	-	0	N	0	N	-	-	0	-	-	3	0
123.55	-	-	N	N	N	-	-	-	-	-	0	0
123.60	-	-	-	-	N	-	-	-	-	-	0	0
127.34	-	0	X	0	X	-	-	-	0	N	5	0.4
127.37	-	-	N	0	C	-	-	-	-	-	2	5.0
127.40	-	-	N	-	-	-	-	-	-	-	0	0
127.42	-	-	N	-	-	-	-	-	-	-	0	0
127.45	-	-	N	-	-	N	-	0	-	-	1	0
127.47	-	-	N	-	-	N	-	-	-	-	0	0
127.50	N	-	-	-	-	RR	-	0	-	-	2	0.5
127.55	-	-	-	-	-	N	-	-	-	N	0	0
127.60	N	-	-	0	-	-	-	-	-	-	1	0
130.30	N	RR	-	N	-	-	-	0	-	N	2	0.5
130.35	-	0	-	N	-	-	-	N	-	N	1	0

Visual Observations of Saury Abundance, 1954 (cont'd)

Night stations occupied	5401	5402	5403	5404	5405	5406	5407	5408	5410	5412	Number of observations	Average weighted abundance
130.40	-	-	-	-	-	R	-	-	0	-	2	0.5
130.45	-	-	-	-	-	N	0	-	N	-	1	0
130.50	-	-	N	-	N	N	0	-	0	-	2	0
130.55	-	-	N	-	N	-	-	-	0	-	1	0
130.60	N	C	0	N	RC	-	C	-	0	N	5	6.0
130.110	0	-	-	-	-	-	-	-	-	-	1	0
133.25	N	N	N	X	-	N	-	0	-	-	2	0.5
133.30	N	0	-	R	N	-	N	-	N	N	2	0.5
133.35	-	-	-	-	C	-	0	-	-	-	2	5.0
133.40	N	-	-	-	VC	N	RC	-	-	-	2	55.0
133.45	-	-	-	-	-	N	-	-	-	-	0	0
133.50	-	-	N	-	-	N	-	-	-	-	0	0
133.60	-	-	-	0-X	-	-	-	-	-	-	2	0.5
137.23	N	-	0	X	N	-	-	0	0	-	4	0.2
137.30	N	N	N	0	-	-	-	-	N	N	1	0
137.35	-	-	N	N	-	N	-	-	-	-	0	0
137.40	N	-	-	-	-	0	-	-	-	-	1	0
137.45	-	-	-	-	N	0	-	-	-	-	1	0
137.50	-	-	-	-	N	-	-	-	-	-	0	0
137.60	-	-	-	0	0	-	-	-	-	-	2	0
137.140	0	-	-	-	-	-	-	-	-	-	1	0
140.30	-	-	-	-	-	-	-	-	-	N	0	0
140.35	-	-	-	-	-	-	-	-	-	N	0	0
140.50	RR	-	-	-	-	-	-	-	-	-	1	1.0
143.26	-	-	-	-	-	-	-	-	-	N	0	0
143.30	N	-	-	-	-	-	-	-	-	N	0	0
143.35	N	-	-	-	-	-	-	-	-	-	0	0
147.20	-	-	-	-	-	-	-	-	-	N	0	0
147.25	N	-	-	-	-	-	-	-	-	N	0	0
147.30	N	-	-	-	-	-	-	-	-	-	0	0
147.90	N	-	-	-	-	-	-	-	-	-	0	0
150.19	-	-	-	-	-	-	-	-	-	N	0	0

Visual Observations of Saury Abundance, 1954 (cont'd)

Night stations occupied	5401	5402	5403	5404	5405	5406	5407	5408	5410	5412	Number of observations	Average weighted abundance
150.25	-	-	-	-	-	-	-	-	-	N	0	0
150.30	N	-	-	-	-	-	-	-	-	-	0	0
150.40	0	-	-	-	-	-	-	-	-	-	1	0
150.50	N	-	-	-	-	-	-	-	-	-	0	0
157.20	-	-	-	-	-	-	-	-	-	0	1	0
157.30	-	-	-	-	-	-	-	-	-	N	0	0

Visual Observations of Saury Abundance, 1955

Night stations occupied	5501	5502	5503	5504	5505	5506	5507	5510	5512	Number of observations	Average weighted abundance
60.60	-	-	-	-	-	0	-	-	-	1	0
60.70	-	-	-	-	-	C	-	-	-	1	10.0
60.80	-	-	-	-	-	-	-	A	-	1	100.0
63.52	-	-	-	-	-	N	0	C	-	2	5.0
63.55	-	-	-	-	-	N	X	VC	-	2	50.5
63.65	-	-	-	-	-	N	C	-	-	1	10.0
67.50	-	-	-	-	N	-	-	-	-	0	0
67.55	-	-	-	-	N	-	-	-	-	0	0
70.52	-	-	-	-	-	-	0	-	-	1	0
70.55	-	-	-	-	-	-	RR	N	-	1	1.0
70.60	-	-	-	-	-	-	C	VC	-	2	55.0
70.70	-	-	-	-	-	N	N	-	-	0	0
70.80	-	-	-	-	-	0	-	-	-	1	0
70.90	-	-	-	-	-	-	-	VC	-	1	100.0
73.50	-	-	-	-	-	N	-	-	-	0	0
73.60	-	-	-	-	-	-	-	RR	-	1	1.0
73.70	-	-	-	-	-	-	0	-	-	1	0
73.80	-	-	-	-	-	RC	X	-	-	2	5.5
73.90	-	-	-	-	-	C	N	-	-	1	10.0
77.50	-	-	-	-	RR	N	-	-	-	1	1.0
77.55	-	-	-	-	N	N	N	C	-	1	10.0
77.65	-	-	-	-	-	-	N	-	-	0	0
77.70	-	-	-	-	N	-	0	-	-	1	0
77.80	-	-	-	-	N	N	-	-	-	0	0
77.90	-	-	-	-	-	N	-	-	-	0	0
80.51	-	-	0	-	-	-	-	VA	-	2	50.0
80.55	-	0	0	0	-	-	-	0	-	4	0
80.60	-	N	-	N	-	-	-	N	0	1	0
80.70	RC	-	-	-	N	N	N	N	N	1	10.0
80.80	RR	-	-	-	-	-	N	-	0	2	0.5
80.90	-	-	-	X	-	-	-	A	-	2	50.5
83.40	0	0	-	-	N	-	-	-	-	2	0

Visual Observations of Saury Abundance, 1955 (cont'd

Night stations occupied	5501	5502	5503	5504	5505	5506	5507	5510	5512	Number of observations	Average weighted abundance
83.43	R	O	-	-	N	N	N	O	C	4	2.8
83.51	-	-	-	O	-	R	C	N	O	4	2.8
83.55	-	-	-	-	-	-	O	-	-	1	0
83.60	-	O	N	R	-	-	-	-	O	3	0.3
83.75	-	-	-	-	-	N	-	-	-	0	0
83.80	-	-	-	-	-	N	-	-	-	0	0
83.85	-	-	-	-	-	N	-	-	-	0	0
83.90	-	-	-	O	-	-	-	-	-	1	0
87.35	O	O	O	N	N	RC	X	-	O	6	1.8
87.40	O	-	O	X	N	-	O	N	N	4	0.2
87.45	-	-	-	-	N	-	-	A	O	2	50.0
87.50	-	-	-	O	-	-	-	VC	O	3	33.3
87.60	-	X	O	-	-	N	-	-	-	2	0.5
87.70	-	-	-	X	-	-	O	-	-	2	0.5
87.80	-	-	-	X	-	O	-	-	-	2	0.5
87.85	-	-	-	-	-	O	-	-	-	1	0
90.28	R	-	RC	-	N	O	O	N	N	4	2.8
90.30	-	RR	O	-	N	X	O	O	O	6	0.3
90.37	-	O	-	R	RC	N	-	-	RR	4	3.0
90.45	-	C	-	O	-	-	-	-	O	3	3.3
90.50	N	-	-	-	RR	-	-	-	-	1	1.0
90.55	-	-	-	-	-	-	-	N	-	0	0
90.60	RR	-	X	-	-	R	O	X	-	5	0.8
90.65	-	-	-	-	-	N	O	-	-	1	0
90.70	R	C	O	O	N	-	-	-	O	5	2.2
90.75	-	-	-	-	N	-	-	-	-	0	0
90.80	-	-	-	C	N	-	-	-	-	1	10.0
90.90	-	-	-	-	-	-	N	N	-	0	0
93.27	R	-	O	-	-	-	-	-	-	2	0.5
93.30	-	-	RR	N	-	-	-	-	-	1	1.0
93.35	-	-	-	-	-	N	-	-	-	0	0
93.40	O	VA	-	RR	N	C	-	N	O	5	22.2

Visual Observations of Saury Abundance, 1955 (cont'd)

Night stations occupied	5501	5502	5503	5504	5505	5506	5507	5510	5512	Number of observations	Average weighted abundance
93.45	-	-	-	-	N	C	-	-	-	1	10.0
93.50	C	C	-	-	N	-	0	N	0	4	5.0
93.55	-	-	-	-	-	-	0	-	-	1	0
93.60	-	-	RR	-	-	-	0	-	-	2	0.5
93.70	-	-	0	0	-	RR	-	-	-	3	0.3
93.75	-	-	-	-	N	N	-	-	-	0	0
93.80	-	-	-	C	N	N	-	-	-	1	10.0
93.85	-	-	-	-	N	-	0	-	-	1	0
93.90	-	-	-	-	N	-	0	-	-	1	0
97.30	-	N	0	-	RR	-	-	-	0	3	0.3
97.32	-	0	0	C	RC	VC	-	-	-	5	24.0
97.35	-	-	-	-	N	N	A	-	-	1	100.0
97.40	-	0	0	0	N	X	VC	-	-	5	20.2
97.45	-	-	-	-	-	-	N	-	-	0	0
97.50	RC	-	-	-	-	-	-	N	-	1	10.0
97.65	-	-	-	-	N	-	-	-	-	0	0
97.70	-	-	N	X	N	-	0	-	-	2	0.5
97.75	-	-	-	-	N	-	RC	-	-	1	10.0
97.80	-	-	-	0	N	-	0	-	-	2	0
100.29	0	0	N	-	-	-	-	-	0	3	0
100.30	RR	0	N	N	-	-	-	-	0	3	0.3
100.40	RR	0	N	X	-	-	0	-	-	4	0.5
100.45	-	-	-	-	-	N	0	-	-	1	0
100.50	C	-	N	-	N	0	-	0	-	3	3.3
100.55	-	-	-	-	N	0	-	-	-	1	0
100.60	-	N	-	-	N	-	-	0	0	2	0
100.70	-	RR	-	0	-	N	-	-	0	3	0.3
100.75	-	-	-	-	-	R	-	-	-	1	1.0
100.80	0	RR	N	0	-	-	R	-	0	5	0.4
100.90	-	-	N	-	N	-	-	0	-	1	0
103.30	0	-	-	-	-	-	-	0	-	2	0
103.35	0	0	N	-	-	-	VC	X	-	4	25.2

Visual Observations of Saury Abundance, 1955 (cont'd)

Night stations occupied	5501	5502	5503	5504	5505	5506	5507	5510	5512	Number of observations	Average weighted abundance
103.40	-	RR	N	0	-	-	0	0	X	5	0.4
103.45	-	-	-	-	-	-	N	-	-	0	0
103.50	-	VA	N	-	N	0	0	-	X	4	25.2
103.55	-	-	-	-	N	0	-	-	-	1	0
103.60	-	-	-	0	N	N	-	-	-	1	0
103.65	-	-	-	-	N	-	-	-	-	0	0
103.70	-	-	-	C	-	-	-	-	-	1	10.0
103.75	-	-	-	-	-	-	0	-	-	1	0
103.80	-	-	-	-	-	-	RC	-	-	1	10.0
103.85	-	-	-	-	-	-	0	-	-	1	0
103.90	-	-	-	-	N	-	-	-	-	0	0
107.30	-	-	-	-	-	-	-	-	X	1	1.0
107.32	0	-	-	-	-	-	-	-	-	1	0
107.35	X	-	-	-	N	-	-	-	N	1	1.0
107.40	0	X	N	N	N	-	-	N	-	2	0.5
107.45	-	-	-	-	0	N	-	-	-	1	0
107.50	-	VC	N	0	0	0	-	-	0	5	20.0
107.55	-	-	-	-	-	0	N	-	-	1	0
107.60	-	-	N	0	-	0	RR	-	-	3	0.3
107.65	-	-	-	-	-	-	X	-	-	1	1.0
107.70	-	-	N	-	-	-	X	-	-	1	1.0
107.75	-	-	-	-	-	-	0	-	-	1	0
107.80	-	-	-	-	N	-	0	-	-	1	0
107.85	-	-	-	-	RR	-	-	-	-	1	1.0
107.90	-	-	-	-	RR	0	-	-	-	2	0.5
110.33	0	0	-	0	-	-	0-N	-	0	5	0
110.35	0	X	-	0	-	0	0-N	-	R	6	0.3
110.40	C	-	N	0	-	0	0-N	-	0	5	2.0
110.45	-	-	-	-	-	0	-	-	-	1	0
110.50	-	-	N	N	-	-	-	0	-	1	0
110.55	-	-	-	-	N	-	-	-	-	0	0
110.60	-	0	RR	-	N	-	-	0	-	3	0.3

Visual Observations of Saury Abundance, 1955 (cont'd)

Night stations occupied	5501	5502	5503	5504	5505	5506	5507	5510	5512	Number of observations	Average weighted abundance
110.65	-	-	-	-	RC	-	-	-	-	1	10.0
110.70	R	R	N	-	N	-	0	-	0	4	0.5
110.75	-	-	-	-	-	0	0	-	0	3	0
110.80	0	N	-	RR	-	0	0	-	0	5	0.2
110.85	-	-	-	-	-	0	-	-	-	0	0
110.90	-	-	-	0	-	-	-	N	-	1	0
113.30	0	A	N	-	N	R	VC	-	0	5	40.2
113.35	-	X	N	-	N	-	-	X	0	3	0.7
113.40	-	-	N	-	X	-	-	0	-	2	0.5
113.45	-	-	-	0	-	-	-	-	-	1	0
113.50	-	-	-	0	-	-	-	-	-	0	0
113.55	-	RR	-	0	-	-	-	-	-	2	0.5
113.60	-	C	-	-	-	0	0	-	0	4	2.5
113.65	-	-	-	-	-	0	0	-	-	0	0
113.70	-	C	RR	-	N	0	0	-	N	4	2.8
113.75	-	-	-	-	X	N	-	-	-	1	1.0
113.80	-	-	-	-	C	-	-	-	-	1	10.0
117.26	0	-	N	-	-	N	0	X	-	3	0.3
117.30	0	RR	-	-	-	RC	0	0	-	5	5.5
117.35	0	A	-	-	-	-	-	0	-	3	33.3
117.40	0	X	-	-	N	-	-	-	N	2	0.5
117.45	-	RC	-	-	RR	-	-	-	-	2	5.5
117.50	0	A	-	C	RR	-	-	-	0	5	22.2
117.55	-	0	-	RR	0	0	0	-	-	5	0.2
117.60	RC	-	-	0	-	0	0	-	-	4	2.5
117.65	-	-	-	-	-	0	0	-	-	2	0
117.70	-	0	N	-	-	0	-	-	-	2	0
120.25	N	-	N	0	-	0	0	-	N	3	0
120.27	-	-	-	-	N	0	-	-	-	1	0
120.30	-	N	N	0	0	0	0	-	RC	5	2.0
120.35	-	N	RC	N	N	R	-	N	A	3	37.0
120.40	0	-	-	-	N	0	-	-	X	3	0.3

Visual Observations of Saury Abundance, 1955 (cont'd)

Night stations occupied	5501	5502	5503	5504	5505	5506	5507	5510	5512	Number of observations	Average weighted abundance
120.45	0	-	-	-	-	-	-	X	RR	3	0.7
120.50	0	0	-	-	-	-	-	RR	N	3	0.3
120.55	-	0	-	0	-	-	-	-	-	2	0
120.60	0	R	-	RR	-	-	0	-	-	4	0.5
120.70	-	-	-	-	N	0	0	-	X	3	0.3
120.80	-	-	N	-	C	0	-	0	-	3	3.3
120.90	N	C	N	-	-	-	-	0	-	2	5.0
120.100	0	0	N	-	-	-	-	-	-	3	0
123.37	0	-	N	0	VC	-	-	0	RR	5	20.2
123.40	0	0	N	0	X	0	-	0	C	7	1.6
123.45	-	0	N	0	N	0	-	-	-	3	0
123.50	-	0	N	0	-	X	0	-	-	4	0.2
123.55	-	0	N	N	-	-	0	-	-	2	0
123.60	-	-	-	0	-	-	0	-	-	2	0
127.34	X	-	-	-	0	-	0	0	C	5	2.2
127.35	-	-	-	0	-	-	-	-	-	1	0
127.40	-	N	-	-	-	-	-	-	-	0	0
127.45	-	0	-	-	-	0	-	-	-	0	0
127.50	-	0	-	-	-	N	-	-	-	1	0
127.55	N	0	N	0	X	N	-	-	0	4	0.2
127.60	-	-	N	0	R	0	-	-	-	3	0.3
130.30	N	0	-	0	N	-	-	-	0	3	0
130.35	-	0	-	-	-	0	-	-	-	2	0
130.40	-	0	-	-	0	0	-	0	-	4	0
130.50	X	0	-	-	-	N	-	0	N	2	0
130.60	0	-	N	0	-	-	0	0	-	4	0
133.25	X	0	N	0	RC	-	0	-	-	5	2.2
133.30	RC	-	N	0	RC	-	-	0	-	4	5.0
133.40	-	-	N	-	0	0	-	-	0	3	0
133.50	-	-	-	N	0	N	-	-	-	1	0
137.23	0	0	-	-	-	-	0	-	0	4	0
137.30	0	0	N	-	-	X	-	0	X	5	0.4

Visual Observations of Saury Abundance, 1955 (cont'd)

Night stations occupied	5501	5502	5503	5504	5505	5506	5507	5510	5512	Number of observations	Average weighted abundance
137.40	-	-	-	0	R	X	-	-	0	3	0.3
137.50	-	-	N	0	0	-	-	-	-	2	0
137.60	-	-	N	-	-	-	-	-	-	0	0
140.30	-	N	-	-	-	-	-	-	0	1	0
140.35	-	0	N	-	-	-	-	-	N	1	0
140.40	-	0	N	-	-	-	-	-	-	1	0
140.50	-	-	N	-	-	-	-	-	-	0	0
143.26	0	0	N	-	-	-	-	-	0	3	0
143.30	0	0	-	-	-	-	-	-	0	3	0
143.35	0	-	-	-	-	-	-	-	-	1	0
147.20	-	0	N	-	-	-	-	-	0	2	0
147.25	-	N	N	-	-	-	-	-	-	0	0
147.30	0	-	-	-	-	-	-	-	N	1	0
150.19	-	0	N	-	-	-	-	-	-	1	0
150.25	0	-	N	-	-	-	-	-	-	1	0
150.30	0	-	N	-	-	-	-	-	0	2	0
153.16	-	0	-	-	-	-	-	-	-	1	0
153.20	0	0	-	-	-	-	-	-	-	2	0
153.30	0	-	-	-	-	-	-	-	-	1	0
153.40	-	-	N	-	-	-	-	-	-	0	0
157.10	N	-	-	-	-	-	-	-	-	0	0
157.30	-	0	-	-	-	-	-	-	-	1	0
157.40	-	-	N	-	-	-	-	-	-	0	0

6339